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USSR Report

HUMAN RESOURCES

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LABOR

GOSKOMTRUD OFFICIAL COMPARES WAGES, PRODUCTIVITY

Moscow SOTSIALISTICHESKIY TRUD in Russian No 5, May 86 pp 25-32

[Article by Yu. Ryabinin, economist with the USSR State Committee for Labor: "On Normative Planning of Increases in Labor Productivity and Average Wages in Industry"]

[Text] Within the system of measures aimed at ensuring a closer connection between the measure of labor and the measure of consumption, an important role is assigned to normative planning of the relationship between increases in labor productivity and increases in average wages. In the final analysis, the increased prosperity of all the members of the socialist commonwealth is directly tied to increased labor productivity and to a corresponding change in the volume and structure of gross national product. In this regard, it is of no small importance what part of it is to be directed toward expanding production and accelerating scientific and technical progress (i.e. to creating the conditions for the further, onward social and economic development of society) and what part is earmarked specifically for the increased well-being of working people. The question of the degree to which labor productivity growth rates outstrip wage growth rates is important for any type of social reproduction, both on the level of the national economy and on the level of its sectors. However this question becomes particularly timely and pressing under conditions of intensified social production. Therefore, it is expedient to examine these relationships in their dynamic form (Table No. 1).

Table No. 1. Relationships of the Growth Rates for Labor Productivity and for Average Wages in Industry (%)

Годы (1)	Прирост средней заработной платы на 1 % прироста производительности труда (2)	Годы (1)	Прирост средней заработной платы на 1 % прироста производительности труда (2)
1946—1950	0,63	1966—1970	0,86
1951—1955	0,23	1971—1975	0,64
1956—1960	0,46	1976—1980	0,84
1961—1965	0,54	1981—1984	0,81

Key:

1. Years
2. Growth of Average Wages per 1 % of Growth in Labor Productivity

Thus, there was more rapid growth of labor productivity in each of the periods listed, but planned relationships between these indicators were not always successfully achieved. During the 10th Five-Year Plan, for example, an increase of approximately 0.6 percent in average wages for each one percent increase in labor productivity was projected for industry as a whole. In fact, however, the increase in average wages came to 0.84 percent and in a number of sectors was even higher. This means that the basic ratios envisaged in the plan, including the ratios between growth of industrial production and personal consumption, between accumulation and consumption in national income, and between production of the means of production and production of consumer goods, were not completely maintained, which is reflected in the balance of the population's monetary incomes with commodity resources.

The main reasons for violation of designated ratios is that labor productivity increases fell behind planned rates and that the intensive factors behind development of social production grew slowly. These causes persisted in the 1981-1984 period. Analysis shows that, during the past four years, growth rates for labor productivity in a number of industrial sectors were lower than the planned rates, although such a lag behind the plan was not observed for wages. Breaches in the relationship between wage levels and the results of labor also occur in part because still existing decrease-side correctives to the plans for production volume are in many cases being applied without corresponding changes being made to plans for labor. Often this is done during the final months of the year, when basic payments from the wage fund have already been accomplished. At the same time, industrial enterprises are making insufficient use of possibilities for additional increases in productivity on the basis of wider and deeper use of the brigade form of organizing labor and providing labor incentives, through the holding down of more than one job and through expansion of service zones, through mechanization and automation of production processes, and by broad utilization of the achievements of scientific and technical progress in production. A number of enterprises are making their "contribution" to the worsening of relationships between increases in labor productivity and in average wages through negligent norm-setting, absenteeism, shutdowns and other losses in working time, which are then compensated for by overtime work at higher pay.

Elimination of these shortcomings would help to speed up labor productivity growth rates and to improve the relationship between growth in the productivity of labor and growth of payment for it.

At a June meeting in the CPSU Central Committee on questions of scientific and technical progress, it was noted that the economy continued to develop during the 1970's through inertia, primarily on an extensive basis. This could not but be reflected in indicators of labor productivity and average wage increases. We have not succeeded in improving these and in achieving an economically founded relationship between the growth rates for wages and labor productivity. Moreover, a tendency toward a worsening of these indicators has appeared.

All this has activated a search for ways to influence the economics of industrial sectors with the aim of ensuring necessary ratios, based first of all on a dependence of amounts of funds used to pay for work upon growth in production volume indicators, particularly upon growth in labor productivity. One such method -- in use since 1984 for the USSR's industrial ministries and for industrial associations and enterprises subordinate to them -- is the application of a planned normative ratio between increases in labor productivity and in average wages.

For practical purposes, normative ratios between increases in the productivity of labor and average wages went into effect for 10,500 enterprises of 23 all-union and union-republic industrial ministries, and also at a number of enterprises subordinate to republic ministries. In combination with other measures, this has made it possible to increase the economic incentive of labor collectives to increase production volumes, basically on account of increasing labor productivity. As is known, 93 percent of the total increase of production for industry as a whole in 1984 was on account of increased labor productivity. All ministries with the exception of the USSR Ministry of Light Industry kept within the planned normative ratios set for them for the year.

For a one percent increase in the productivity of labor in industry during 1984, there was a 0.68 percent increase in average wages, as against an average of 0.87 percent for the preceeding three years of the five-year plan. At the same time, in the ministries where this norm was used, actual results turned out to be 1.6 times as good as the average for industry and twice as good as the corresponding indicators for the first three years of the five-year plan.

Considering that, for industry as a whole, every sixth enterprise did not stay within the normative ratio established for it by the plan and that in many ministries there were groups of enterprises which permitted excessive growth in wages compared to growth in labor productivity, improvement in ratios between increased labor productivity and average wages for industry as a whole in 1984 could have been even more substantial.

In an article entitled "On Indicators of the Results of Production and Providing Incentives for their Improvement" (SOTSIALISTICHESKIY TRUD, 1986, No 4, pp 72-81) Candidate of Economic Sciences N. Vladova expresses the thought that a normative dependence between increases in average wages and increases in labor productivity basically slows down reduction of labor costs. In this connection, it should be noted that practical results, as will be discussed below, do not support such a conclusion.

As is known, no normative ratios between increases in labor productivity and average wages were ~~established~~ for the first five industrial ministries which took part in a broad-scale economic experiment beginning on 1 January 1984. The results of 1984 showed that in practically all these ministries the actual correlation of increases in labor productivity and average wages worsened considerably.

For example, the indicators of the correlation of increases in the productivity of labor and in average wages for the Mintyazhmash (Ministry of Heavy Machine Building) and Minelektrotekhprom (Ministry of the Electrical Equipment Industry) were considerably higher, i.e. worse, than for the Minenergomash (Ministry of Power Machine Building) and Minselkhoz mash (Ministry of Agricultural Machine Building), which have approximately the same labor productivity growth rates in comparison with average annual rates for 1981-1983. The absence of a brake on the growth of average wages compared with the growth of labor productivity in the form of a normative ratio in the first two industrial ministries not only did not lead to a fundamental quickening of labor productivity growth rates, but to a certain degree created conditions for a "legitimate" increase in expenditures for wages for each percentage point of labor productivity increase. At the same time, the setting of a normative ratio within plans for the Mintyazhmash and Minselkhoz mash did not keep them from achieving the same increase in labor productivity growth rates as the Mintyazhmash and Minelektrotekhprom, while maintaining lower growth rates for average wages.

The active influence of this planned norm on improving the correlation of labor productivity and average wage growth rates is also confirmed by the results of the work, under experimental conditions, of 7 machine building ministries during 1985. In accordance with the terms accepted for this experiment, a planned normative ratio between labor productivity and average wage growth rates was applied to 5 of the machine building ministries. As during 1985, this indicator was not applied to the Mintyazhmash and Minelektrotekhprom. The indicators of the Mintyazhmash and Minelektrotekhprom, as compared to the corresponding indicators of the 5 other machine building ministries participating in the experiment, are characteristic in this connection.

In 1985, as previously, enterprises of the industrial ministries for which the normative ratio was applied, which were operating under the same conditions as the enterprises of the Mintyazhmash and Minelektrotekhprom for which this indicator was not applied, achieved better indicators of wage growth per percentage point of increase in labor productivity and, at the same time, achieved high growth rates for labor productivity.

Therefore, we can conclude that this indicator has proven itself economically and that there is full justification for its application to enterprises of all industrial ministries which will be implementing the new methods of economic management (khozyaystvovaniye), as well as at industrial enterprises of nonindustrial ministries. Starting in 1986, the normative ratio indicator will also be utilized in planning the economic activity of construction and transport enterprises and organizations subordinate to the corresponding all-union ministries.

At the same time it should be underlined that the normative ratio cannot be looked upon as the only method of ensuring the leading growth of labor productivity. By its nature, this norm is an addition to the system of

measures aimed at improving normative methods of forming wage funds and is a particular form of state control to ensure a close tie between the amounts collectives use for wages and the results of their work.

It is anticipated that during the 12th Five-Year Plan, with broad implementation of the new methods of economic management which substantially broaden the rights of labor collectives in their utilization of wage funds and material incentives, the significance of the indicator of a normative ratio between increases in the productivity of labor and of average wages will grow still further. In this connection, the problem of ensuring a close connection between the size of the wage funds of collectives and the results of their work moves to the forefront, both in the planning stage and in analyzing the results of their productive activity. In the first instance, this concerns formation of the wage fund.

From the example of a majority of machine building ministries, where the wage fund is determined by norm, proceeding from production volume according to an indicator of normative net production (normativno-chistaya produktsiya), it is evident that this norm is not tied closely enough to production increases expressed in natural terms. It happens that an increase in normative net production volumes can be achieved as a result of structural shifts, of an increase in the share of output having a high proportion of wages and profits in the wholesale price. Under these circumstances we see a growth rates for normative net production outstripping those for commodity production.

Unfortunately, these tendencies are extremely widespread, and by this means certain collectives are receiving substantial additional funds for wages which are not sufficiently related to real, socially necessary expenditures of labor for the output of production. The results of the work of several enterprises of the Minelektrotekhprom, based on figures for the first half of 1984, are indicative in this regard (Table No. 2).

Calculations for the enterprises listed in Table No. 2 show that, when the wage fund is determined on the basis of the increase in the volume of commodity production rather than normative net production, its size would be increased considerably less than it in fact was; moreover, it would have been necessary to reduce it at the first two enterprises.

Ensuring progressive proportions between growth in labor productivity and increases in average wages depends not only on calculation of individual factors effecting the size of the wage fund, but also upon commonly accepted principles of forming these funds. Thus, increasingly wide use is being made of the "growth" (prirostniy) method of forming wage funds in accordance with a norm for each per cent of production volume increase. However, in practice, the role of this norm as an incentive to achieving high growth rates for production volume and labor productivity has turned out to be considerably

Table No. 2. Comparison of indicators of volumes of production and of the wage fund, computed by various methods (in percentages)

Объединение (предприятие) (1)	Повышение роста объема производ- ства по показателю нормативно-чи- стой продукции в сравнении с ростом товарной продукции (2)	Прирост (уменьшение) фонда зарботной платы по нормативу, рассчитанному по (3)	
		нормативно- чистой продукции (4)	товарной продукции (5)
Белорусское ПО «Запэлектромаш» в Могилеве (6)	+12,9	+1,4	-3,1
Медногорский электротехнический завод «Уралэлектромотор» (7)	+12,3	+3,4	-1,0
Сибирский завод электромашино- строения им. 60-летия СССР (8)	+10,9	+4,0	+0,1

Key:

1. Association (enterprise)
2. Increase in growth of production volumes according to the indicator of normative net production compared to growth of commodity production
3. Increase (reduction) in wage fund according to a norm calculated on the basis of
4. Normative net production
5. Commodity production
6. Belorussian Zapelektromash production association in Mogilev
7. Mednogorsk Uralelektromotor electrical equipment plant
8. Siberian electrical machine building plant imeni 60th Anniversary of the USSR

smaller than anticipated. In the Belorussian SSR Ministry of Light Industry during 1984, for instance, only six percent of the total growth in average wages was received on its account, while more than 40 percent of the ministry's enterprises increased average wages for their workers within the limits of the base fund. Incidentally, all these enterprises realized relative wage fund savings and more than half of them received absolute savings. This indicates that accumulated wage funds, to all appearances, are inflated and insufficiently related to the real labor costs of turning out production.

It is also necessary to consider the fact that the state annually allocates centralized funds for retooling production and also implements measures to improve labor division and cooperation. It has been calculated that more than two thirds of all growth in production volume and labor productivity is accomplished on account of this. These results are not directly tied to the

efforts of the collectives and should not automatically result in wage fund increases. Calculations carried out in a number of ministries have shown that if, for instance, the change in the share of assembly parts within the total volume of production and the corresponding reduction of labor expenditures were to be taken into account, then the wage fund should be reduced by 1 - 1.5 percent. If measures for the introduction of new technology and the number of workers freed as a result were taken into account, it would be possible to reduce the wage fund for the ministries as a whole by another 1.7 - 3.2 percent.

The expenditure of wage funds for the labor costs of collectives which, in fact, are not justified for the production of output "eats away", as it were, at wage equalization, weakens the incentive role of wages, and makes it difficult to ensure progressive proportions between the growth of wages and increased labor productivity. In our view, these circumstances should be considered more fully when planning wage funds, keeping in mind that provision of "incentives" does not necessarily mean "increasing" the size of funds for wages. For enterprises operating under the new conditions of economic management, it seems expedient to establish a long-term norm for reducing the base wage fund, taking account of reductions in the number of personnel in connection with the realization of planned measures to improve equipment, technology, and the organization of production and labor at existing enterprises.

In putting together personnel complements to service newly introduced production capacities, it is important to make maximum use of personnel who are being freed at existing enterprises. In this case it is justified to form a part of the wage fund for paying the workers of new enterprises from funds which are made available at existing enterprises. Another part of the funds which are freed from wage funds could be used to increase, by one-and-a-half to two times, the norm for wage fund growth for each per cent of production volume growth. This would increase the role of this norm as an incentive in creating basic worker interest in increasing production volume and labor productivity.

Now, when the new economic management mechanism is coming into increasingly wide use and a number of its elements are being experimentally tested, it seems important more thoroughly to study possibilities for industry's use of wage norms per ruble or unit of production expressed in natural form. Ensuring a direct connection between the size of wage funds and final results (in the form of specific manufactured articles or per ruble of their value) would make it possible to account more fully for the real labor content of production and changes in it influenced by scientific and technical progress. This would be positively reflected in improved proportions between growth of production volumes and wage funds (and through them, of workers' average wages) and of labor productivity.

There are also a number of other problems in the area of ensuring a close connection between the size of the wage fund and the results of labor. For

example, the Ministry of the Electrical Equipment Industry for several years already and unlike other industrial ministries, has been including the economic effect of consumer use of new manufactured articles in the highest quality category in its calculations of normative net production volumes. In 1954, one fifth of the ministry's increase in production volumes, and correspondingly in the wage fund, was a result of this factor alone. The effect of an increase in quality, being taken into account in the volume of normative net production, had a favorable influence on the indicator of labor productivity growth and, consequently, was reflected also in the correlation of this indicator with the growth of average wages. But because of these indicators, besides this (in addition to the wage funds), the material incentive funds of the sector's enterprises received 19.7 million rubles during the first 9 months of 1954. If we additionally consider that high-quality products, for which a higher price is asked, do not always require more labor than those produced earlier, the question arises as to how much justification exists for currently developed forms of incentives for scientific and technical progress. Indeed, for them to be effective, it is important, along with material interest, also to create within the enterprises an economic NECESSITY to carry out these measures, with real freeing of personnel and reduction in wage funds. Multiple incentives, let us say, for high quality production through the wage fund and the material incentive fund seem to be superfluous.

A number of problems have come to light as a result of using the planned normative ratio of increases in labor productivity and in wages during 1954.

In our view, the influence of this indicator would be greater if it were to be applied to the entire average wages of industrial production personnel, and not only to the so called "accounting" (raschetny) average wages. The latter does not include wage fund savings from working with fewer personnel, which are used for establishing appropriate supplementary payments, raises, premiums and awards. Also excluded from it are premium awards for producing output in the highest quality category and new consumer goods of improved quality, and also awards for savings in material resources.

There is sufficient justification for such a division of workers' wages into actual total wages and partial accounting wages. Actually, the influence of all factors connected with the growth of labor productivity and of workers' average wages manifests itself in various ways. Efforts aimed at raising the quality of production and at economy of energy and material resources do not lead directly to an increase in production volumes. The full utilization of all wage fund savings obtained as a result of reducing numbers of personnel does not, of course, improve the correlation between increases in labor productivity and average wages.

At the same time, it appears that incomplete accounting for funds actually expended on workers' pay when calculating average wages weakens the role of wages as an incentive in achieving high final production results on account of intensive factors. Moreover, it is necessary to keep in mind that in recent

years the relative share of payments from the material incentives fund in the average wages of the worker has been steadily growing, and in a number of sectors the greatest part of average wage increases is being realized as a result of such payments. This also relates to premium payments, which are not considered in the normative ratio between labor productivity increases and increases in average wages.

Thus, according to data of the Estonian SSR State Committee for Labor, the accounting average wages of industrial production personnel within the Estonian SSR Ministry of Light Industry in 1984 were increased by one percent but, taking account of all awards received from the material incentives fund (including awards for turning out improved quality goods with the designation "N"), this increase came to 4.1 percent. At a number of enterprises, with a reduction in rates of increase of labor productivity and accounting wages, actual payments increased by 4 - 5 percent, which actually resulted in substantially more rapid growth rates for average wages in comparison with labor productivity. Such facts are not unique. In this connection, we cannot consider justified the proposal that has been submitted that all new and new types of awards, supplementary payments and raises not be taken into consideration when calculating planned ratios between growth rates for labor productivity and wages.

At the present time, objective possibilities are being developed to account fully for all payments from wage funds within the normative ratios. In the first instance, these possibilities are related to expansion of the rights of labor collectives, to the economic independence of enterprises and to their increased responsibility for the results of their work. In the new conditions of economic management, labor collectives have been given the right to determine themselves the specific amounts and directions in which the unified material incentives fund formed at the enterprises will be utilized, in other words, to redistribute allocations going into the fund in order to stimulate efforts in the most important directions of work.

The economic responsibility of enterprises for failing to observe ratios established in the plan weakens the accepted system of applying sanctions for this type of violation. As is known, sanctions are applied in most cases only when the plan for labor productivity growth has not been met. This leads to the circumstance that enterprises fulfilling a not always difficult plan for labor productivity may have an average worker wage increase of as much as 0.7 percent for a one percent increase in the productivity of labor.

The number of enterprises which avoid having a part their material incentive funds withheld for violating the normative ratio established for them by the plan is rather large. According to available estimates, this type of withholding has been imposed only at one of every 6 or 7 enterprises where this indicator has deteriorated. Obviously, enterprises of the industrial ministries should bear stricter responsibility for observing normative ratios

between increases in labor productivity and average wages which have been approved for them.

Recently, other problems demanding solution have also arisen, first among them the need to reach a better basis for the size of the norms set at the various levels of planning. Indeed, its role as an incentive in achieving high growth rates for labor productivity and the guarantee of progressive proportions with regard to wages are dependent on this to a large degree. However, cases have been frequent when senior organizations have set tasks for subordinate enterprises for labor productivity growth and the normative ratio for increases in this indicator in comparison with increases in average wages at the actual level of the previous year. As a rule this has led to a certain increase in funds for wages which are not supported by increases in productivity, since, as indicated above, a number of payments are not taken into consideration when calculating the correlations which have actually developed.

The ministries and all-union production associations have not exercised full control over whether the distribution of the plan ratio by quarters of the year directly at the enterprises has been well-founded. Enterprises accomplish such distribution independently according to agreements with superior organizations. But often enterprises, especially during the first months of the year, set ratios for themselves which make it possible to receive wage funds without any connection at all to increased labor productivity. For example, at the Polotsk Steklovolokno Production Association of the Ministry of the Chemical Industry, the normative ratio for the first quarter of 1985 was set at a 1.9 percent increase in average wages for a one percent increase in labor productivity, while the plan for the year called for a corresponding increase of 0.48 percent (in fact, it came to 0.68 percent). Thus, questions of ensuring that the sizes of ratios are well-founded still have not been finally resolved in the practice of their application.

The Basic Directions of Economic and Social Development of the USSR for 1986-1990 and for the Period to the Year 2000 call for ensuring that the amounts of funds which are received by associations and enterprises for developing production and for wages are strictly dependent upon the final results of their economic activity and for raising the importance of indicators which reflect the effectiveness of the use of labor, material and financial resources. It was stressed at the 27th CPSU Congress that a firm dependence of the growth of wages on increased labor productivity is the most important requirement of management in modern conditions.

Drafts of the plan for 1986 and for the 12th Five-Year Plan call for considerably accelerating labor productivity growth rates. In this connection, there is a need to increase the role of the normative ratio of labor productivity and wage growth rates in order to ensure a greater correlation between the results of labor and payment for it. Along with other measures, this would have a positive effect on increasing the role of wages as an incentive. It is apparent that questions of improving the normative ratio indicator must be resolved in close connection with the development and refinement of forms and methods of effective management under new economic conditions.

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LABOR

DECREE ON EXPANSION OF MANAGEMENT RIGHTS

Moscow IZVESTIYA in Russian 7 Jun 86 p 2

[TASS report: "On Additional Rights of the Managers of Industrial Enterprises"]

[Text] For purposes of further strengthening the role of economic methods of management, the USSR Council of Ministers has passed a decree "On Expanding the Rights of Managers of Industrial Associations, Enterprises and Organizations in Approving Personnel Staffs".

In accordance with this decree, beginning in 1987, the approval of limits in the numbers of administrative staff workers for industrial associations, enterprises and organizations is abolished, as are limits to allocations for maintaining these workers. Normative planning of the wage fund for management personnel, engineering and technical workers and other employees is introduced. It is prescribed that, for industrial associations, enterprises and organizations, a wage fund norm will be established for these workers, along with a wage fund norm for designers, technicians and scientific workers. The USSR Council of Ministers established a system for developing and approving stable norms for the five-year plan.

The managers of industrial associations, enterprises and organizations bear personal responsibility for irrational expenditure of the assets of wage funds for management personnel, engineering and technical workers and other employees and implement organizational and technical measures aimed at systematically improving the management of production and at cutting back on positions for which there is no production need.

All-union ministries and departments and the councils of ministers of the union republics are called upon to ensure strict supervision of the correct and effective expenditure of employee wage funds while, in a timely way, uncovering and putting an end to instances of illegal expenditure of funds for these purposes.

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CSO: 1828/114

LABOR

BUNICH FOCUSES ON NEW APPROACHES TO LABOR PRODUCTIVITY

Moscow EKONOMICHESKAYA GAZETA in Russian No 24, Jun 86 pp 6-7

[Article by USSR Academy of Sciences Corresponding Member P. G. Bunich: "The Distribution Mechanism of Production Effectiveness"]

[Text] Distribution occupies one of the most important places among the problems concerned with rebuilding the economic mechanism. And this is understandable. After all, the distribution mechanism has the great force of reverse influence upon management effectiveness. The efficiency of distribution relationships depends on how well each of their forms is substantiated and on how mutually consistent they are. There are still many unanswered questions in this area. Some of them were raised in the articles "Problems of Radical Reform" and "Breaking Down the Stereotype of Equalization" (EKONOMICHESKAYA GAZETA, No 20, 22).

How to Account for Expenditures of Natural Resources

In my opinion an examination of the forms and methods of distribution should be preceded by an analysis of the grounds on the basis of which production expenditures are accounted for. Unfortunately there are many levels to the definition of material expenditures, and this multiplicity of levels distorts the assessment of the true volume of prior labor. Thus payment for water was introduced relatively recently: Water is now paid for out of profit.

But consumption of other natural resources--coal, oil, metallic ore--is accounted for in the cost of production. What is the explanation for this discord? It is said that payment for water reflects not so much the expenditures on its delivery to consumers as the usefulness of water. With the introduction of such payment, price setting practice consequently took a step toward accounting for the consumer properties of a product. We must of course continue traveling in this direction. I think that it would be more proper to pay for all natural resources, as well as the expenditures "supplementary" to them, on the basis of product cost, and that these expenditures should be evaluated with regard for effectiveness.

Next let us consider payment for land. Today such payments are made only as a means of compensating for land removed from agricultural turnover, and when drawing up planning estimates. In reality, however, enterprises do not

make such payments, and consequently they are not interested in reducing the amount of territory they occupy, and thus their expenses are reduced artificially. It would seem suitable to introduce payment for land, and account for it in product cost. In my opinion it would also be necessary to take depreciation deductions from the fixed capital of scientific institutions. This solution is fully logical, inasmuch as science is becoming a direct productive force.

The "Earned" Wage Fund

One of the central problems of distribution is the volume of the "earned" wage fund. In the new economic conditions this fund is formed out of a basic fund (if growth of labor productivity in the current period is not below its mean annual growth in the previous 5 years), and it is increased with every percent increase of NChP [not further identified]. This is better than the previous method, in which the wage fund could be increased even without growth in labor productivity, but it does have flaws as well. The problem is that the basic wage fund is inflated in many cases owing to presence of excessive numbers of workers, which is in turn the product of the frequently low output norms of these workers. It is also exaggerated because its full volume is paid out even when the scale of production is inadequate, when product quality is low and when the assortment is obsolete. When such a "basis" is used for the wage fund, any increases in it reproduce all of its shortcomings.

This in my opinion is precisely the main cause of the known weakness of some experiments in assigning previously evolved wage funds to the collectives, beginning with the Shchekino experiment. The experiments doubtlessly helped to raise interest in working with an eye on quality and not quantity, but on the whole it was the collectives that possessed inflated wage funds in the initial period that gained the advantage.

From my point of view the practice of using the wage fund as the "basis" is in conflict with production growth, which is impossible without additional wage funds. Some things are already being done to resolve the arising conflict. In particular, the new economic conditions call for increasing the wage fund when capital investments are large, though the gauge by which growth in wages is measured is rather subjective. Moreover when the sphere of budget financing, and of sector financing equivalent to it, is developed excessively, the collectives often introduce much equipment and create surplus fixed capital at state expense, owing to which the equipment-to-manpower ratio increases, making it possible to reduce the number of personnel and force an increase in the average wages of the workers.

In the new system for stimulating the labor of process engineers and designers, assigned wage funds are increased in the event that a planned increase in the work volume occurs, but the possibilities for increasing the funds are not clearly determined.

Things are better with the trade experiment being conducted in Moscow. Here the basic wage fund must not exceed a standard level. The fund is determined as proportion of commodity turnover, which decreases somewhat as planned

reduction of the labor-intensiveness of the sales function decreases. But even with a standard fund the tendency for excessive growth of the wage standard is not fully surmounted, and consequently the wage resources may become inflated.

One solution is to form the wage fund on the basis of the cost distribution of sold products. Actual material expenditures would have to be subtracted from it first. What remains is the actual net product, which includes wages and profit. How are these to be divided up? The simplest way is to employ unified sector (subsector) standards. But this method does not always arrive at optimum proportions in relation to specific enterprises with differing needs. It is even worse to divide net product into its components--wages and profit--in proportion to how these factors had evolved in the past. All this would do would be to reproduce all of the shortcomings of the basic wage fund.

In my opinion an optimization method in which the collective's consumption fund is maximized over the long range is the best method of distributing net product. The tendency to inflate the volumes of current consumption will be weakened to the extent that growth of the wage fund depends on investments. In other words the long-range interests of the collective do not reduce to maximizing wages; instead they presuppose development of the enterprise's production potential.

The net product indicator is already being used for these purposes on an experimental basis at the Tulasantekhnika and Chuvashstroyaterialy associations and at the Cheboksary Stroykeramika Plant. Determination of wage funds by special standards on the basis of this indicator--after subtracting capital payments--is foreseen for the Belorussian SSR Ministry of Light Industry.

Formation of the wage fund on the basis of net product may require additional regulation of the fund. This could be done by taxation methods, using a tax on the degree to which the actual wage fund exceeds the assessed (taxable) value of the fund. Were we to tax any excess over a standard average wage, the collectives could collect a surplus number of unskilled workers receiving relatively low wages, which would artificially reduce average wages; because state income would decrease, the collective would also experience a lower work load.

The problem is to make current accounting permit efficient determination of net product. The direct material expenditures that must be subtracted from prices are known. It is harder to extract these expenditures from indirect expenditures, the proportion of which is large, with a tendency toward further growth. Information on material outlays applicable to these expenditures becomes available in about the middle of the following month. We need to either accelerate "breakdown" of indirect expenditures by mechanizing accounting procedures, or we must first calculate wages on the basis of NChP and then make corrections with regard for the actual material outlays. Other methods are possible as well.

Wage "Ceilings"

A maximum level is set today for extra pay added to wages, and the total dimensions of bonuses are limited. As a result workers who exceed the established incentive limits are not interested in further growth of labor effectiveness. As a consequence the possibilities for raising labor productivity are not utilized, and the shortage of labor resources is aggravated. Bonus limits are also an obstacle to the fullest possible economization of raw materials and fuller utilization of productive capacities. Of course, timid innovations have recently been introduced into this area. "Ceilings" no longer exist in the pay of the workers of planning and design subdivisions and of the central administrations of industrial ministries that have switched to the new economic conditions. The limitations upon growth of wages have also been weakened somewhat by the application of "brackets" delineating maximum and minimum wages, as was done by the AvtoVAZ.

It seems to me that regulation of the dimensions of the wage fund and of individual pay through taxation would make it possible to smooth out unjustified income fluctuations, and that it would be a more effective tool of social adjustment.

But even this tool does not completely exclude the need for adjusting wages by means of special coefficients in the initial stage. The reason for this is that low labor productivity and poor product quality are brought about at a number of enterprises by causes having nothing to do with the collectives themselves: One enterprise might lack investment capital with which to renovate production, while another might not have enough raw materials to continue work on the basis of the required shift schedule. Prices do not insure the needed profitability in all cases. Were such enterprises to switch to a new method of forming wages, they would find that their assets are unjustifiably deflated, and their collectives would find themselves in a position of being "blamelessly guilty."

Correction coefficients would also be needed because enterprises with historically evolved favorable production conditions could otherwise inflate their wage funds in comparison with their current accomplishments in labor. It would apparently be suitable to establish increasing wage coefficients for the first group of enterprises and decreasing coefficients for the second. All that is important is that these coefficients be used as an exception, that they be established for a particular period of time, and that they gradually undergo a decrease ending with their repeal. But as calculations made in relation to some sectors show, such coefficients would not be required for the overwhelming majority of enterprises.

Loan Resources

It would be suitable to use credit when a temporary shortage occurs in stimulation funds. Loans to pay basic wages are not foreseen by the existing economic mechanism. But if an enterprise finds itself needing a loan, and if its ability to pay a loan back is substantiated, loans to pay wages, and in the final analysis to acquire objects of consumption, do not differ in

principle in any way from loans for acquisition of equipment, construction materials and other production resources. In both cases the loans must be used for specific purposes, they must have a specific date of maturity, they must be repayable, they must be solvent, and their interest rate must be differentiated depending on the stability of the enterprise's position.

One thing that makes loans for production expenditures and housing construction different from wage loans is that different sources must be used to pay them back and to pay interest on them. The production development and the social and cultural measures and housing construction funds are used in the first case, and wage funds are used in the second. From my point of view it would not be economically justified to repay all loans and pay interest on them out of accumulation funds, since this would make it possible to increase consumption funds covertly.

Active encouragement of enterprises to take advantage of bank resources raises the question of increasing the country's loan fund and finding effective methods by which to form it. One such method is to charge interest on temporarily idle assets of an enterprise held in its account. This interest would perform a number of functions: For example it would increase the interest of enterprises in leaving their assets with banks for the longest time possible, if higher interest rates are introduced on time deposits. The interest rate could serve as a measure of minimum profitability below which capital investments into the enterprise's own production would be economically disadvantageous. And this would make it possible to concentrate capital investments on measures promising a higher return. In accordance with the new economic conditions, enterprises are charged interest for temporarily free assets of the production development fund held by the bank. But banks also hold other assets on which interest is not charged.

In my opinion the interest rates should be derivatives of economic processes and of the objectives of the plan, and they must become an instrument by which to achieve its objectives. The larger the loan fund, the lower the interest can be. Today, the interest rates on loans are economically low and negligibly low, and in view of this, they are incapable of performing any important economic functions.

The loan repayment procedure also requires improvement. Today as an example long-term loans are paid back from the production development fund as well as from excess profit. But free excess profit is nonexistent in the standard method of determining profit. It is distributed for different purposes in the same way as planned profit.

Payments from Profit

As we know, fund payments were introduced with the purpose of limiting the surplus demand of enterprises for productive capital they receive free, and of making the enterprises interested in obtaining a high return from this capital. Would it be suitable to retain this system after switching to self-financing?

In self-financing conditions the demand of enterprises for capital investments is already limited to earned resources. On the other hand the effectiveness of utilizing productive capital is ensured in my opinion by an interest in growth of profit. After all, the necessary assets for stimulation and development can be created only by increasing profit. Therefore fund payments could be retained only in relation to facilities created prior to the transition of the enterprises to self-financing. Such payments should perhaps be used as a means of repaying assets advanced for the construction of new enterprises when such construction is financed by the budget. But in regard to enterprises with low profitability (these are precisely the cases in which budget financing is especially required), it would be suitable to reduce fund payments or to leave them out altogether. There seem to be good grounds beneath the proposal made by participants of the discussion on reorganization of the economic mechanism to expand new construction, when a high rate of return is ensured, at the expense of the project's own assets and bank loans (see EKONOMICHESKAYA GAZETA, No 20).

The following question arises: How do we tie in a single or a progressively increasing norm of payments from profit with the varying economic conditions of the enterprises? The following approach is justified from my point of view. Most normally profitable enterprises should make payments into the budget on the basis of a single proportionate (or progressive) scale. Enterprises with the highest profitability should also make fixed payments from profit, or they should pay especially large tax installments. Such deductions may be combined into a single payment together with other installments paid into centralized funds and reserves of the ministries, as foreseen as of 1987 in the USSR Ministry of Light Industry.

For a certain while, unprofitable enterprises could receive additional deductions from the ministry's centralized funds on a progressively decreasing scale. When work effectiveness increases, any of these assets which are left over would remain with the collectives. But if the enterprise ends up short, expenditures could be compensated by the enterprises by reducing the production development fund and bonus resources, by committing reserves and by taking out loans.

Profit is the source of payment of penalties, which can perform their role adequately only when they begin to compensate consumers for all losses caused by suppliers. It would be suitable to use profit to pay for losses caused by waste, to correct the consequences of such waste, and to cover losses resulting from mark-downs and write-offs of unsalable goods.

Profit as a Source of Stimulation

Profit may play a more active role in stimulating highly effective labor in the collectives. The proportion of products in the top quality category is one of the indicators used to evaluate the work of a collective. Stimulation funds are determined on the basis of standards with regard for this indicator, and then they are "subtracted" from profit. But the rate of growth of profit might not be high enough to compensate for the calculated amount of the bonuses paid for product quality.

Things are different with formation of stimulation funds on the basis of the labor productivity indicator. These and many other inconsistencies between the indicators used to evaluate the work of collectives and profit reduce the role of stimulation, inasmuch as they limit its financial sources. Stimulation sometimes becomes declarative, ineffective. And then we are forced to resort to "first aid" in the form of the centralized funds of the ministries, and to reduce payments into the budget. As a result stimulation funds frequently grow faster than profit, which is economically unjustified.

The experience of the Sumy Machine Building Scientific-Production Association imeni M. V. Frunze, AvtoVAZ, personal services enterprises, the Belorussian SSR Ministry of Light Industry and the Main Administration of Motor Vehicle Transportation of the Moscow City Executive Committee, and the self-financing procedures that are to be introduced as of 1987 into light industry, into the Ministry of Chemical and Petroleum Machine Building and into certain enterprises in other sectors represent a different, progressive trend. These measures essentially require that profit be distributed on the basis of certain standards between the budget and the enterprise. Inasmuch as profit now becomes both an indicator and a source of stimulation, stimulation funds would always be consistent with financial resources, and they would be proportional to the actual contribution made by the collectives to the society's income.

Stimulation funds could be increased as an exception only on a subsidy basis. As an example the stimulation funds of light industry enterprises producing children's goods could be increased at the expense of the centralized funds of the ministries.

This example provides a concrete picture of the new approach to establishing centralized quotas, one which entails supplementing the administrative force of these quotas with the profitability of state orders. If this profitability is sufficiently high, the state may distribute its quotas on a competitive basis, showing preference toward those collectives which would fulfill them with the lowest outlays, better, faster and for a lower price.

When collectives live on the basis of earned income, when they are interested in investing each ruble, and try to receive the greatest return, the need for determining their every step through directive orders, which usually results in overstatement of indicators determined from above, disappears. Why for example should numerous quotas for economization of material outlays be set for enterprises if an interest in growth of profit does the same thing?

In the existing system, the inconsistencies in the levels of outlays and results, which are unavoidable within certain limits, are planned for, and they are of little concern to the collective. In order that outlays do not go out of balance with results, both of these indicators are "improved" from above each year. As a result even a temporary slight worsening of either of these indicators, which is necessary for future significant growth of effectiveness, is not permitted as a rule.

But when stimulation and wage funds are formed by direct deductions from net production, a self-financing enterprise must compensate for these inconsistencies through its own resources--by its reserves in combination with loans. This approach would promote transition to production of new articles and to assimilation of progressive procedures over a period of several years. For the moment such reserves have a narrow purpose--for example to cover excessive losses in housing and municipal management, or a shortage of working capital. Wage resources are presently entered into the reserve when a normal relationship between growth of average wages and growth of labor productivity is disturbed at the enterprises. These assets are then unfrozen if the situation improves. Thus we find that the reserves are of no help to the businesses when they fall into difficult times and require additional resources.

It seems to me that it would be suitable to make fundamental changes in the distribution mechanism right now, in this five-year plan.

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QUALITY OF TRAINING TO MEET LABOR NEEDS EXAMINED

Moscow IZVESTIYA AKADEMII NAUK SSSR: SERIYA EKONOMICHESKAYA in Russian
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[Article by T.K. Shirokova: "On the Trends of the Qualitative Characteristics of the Working Populace"; passages enclosed in slantlines printed in boldface in text; numbers in brackets refer to bibliography]

[Text] This article examines certain aspects of the qualitative development of the workforce. It shows approaches to analysis of changes in skills and in the complexity of labor. It provides a detailed analysis of the quality of labor in connection with the education and skill level of the workers. And it outlines the prospects for development in the area of the education and training of cadres.

The 27th CPSU Congress set forth grandiose tasks for accelerating the socio-economic development of Soviet society. "The Party associates successful solution of the tasks outlined," states the new edition of the CPSU Program, "/with increasing the role of the human factor/" [3]. Our cadres must understand the vital necessity for reorienting each enterprise, each branch, and the entire national economy, toward the intensive path for development.

Many factors impinge on the increase in the complexity of labor and on improving its quality. Among them one should single out above all the changes in the sex and age structure of the workforce. The composition of the employees in terms of sex and age is closely associated with the nature of production: the different spheres of activity require certain optimal correlations which are adequate for the application of male and female labor in the corresponding age groups. As analysis shows at the present time two positive trends are operative: the trend toward equality in the employment of the economically-active populace by sex, and the replacement of the older age groups with younger people with a higher level of education and greater demands on the working conditions.

Obviously the aforementioned changes, which are bringing the sex and age composition of the evolved employment structure to the optimum, are increasing the quality of the workforce.

Another important factor, on which the quality of labor resources depends, is the increase in the workers' educational-skill level. The methods of analyzing this level, which are examined later on, reflect: (a) changes in the skill and the complexity of labor associated with acquiring production experience and practical work habits; and (b) the increase in the level of general and special education.

The length of service in a given specialty or in a related specialty undoubtedly has an effect on the quality of the workforce; however, lack of statistical data does not permit fully characterizing its influence on the formation and accumulation of work habits.

One possible approach to an analysis of the changes in the skill and complexity of labor associated with acquiring production experience and practical work habits is to calculate the dynamic of the average wage category for industrial workers according to the branches of the national economy--which to a certain extent reflects the dynamic of the indicator of labor quality.

Introducing a single six-category wage scale for all branches would permit more accurately accounting for changes in work skills and would make it much easier to conduct an analysis of this indicator. Accounting for the distribution of workers according to the wage category has shown that in only three years, from 1979 through 1982, the average wage category for industrial workers increased from 3.42 to 3.53; and in construction from 3.81 to 3.91, respectively. However, hiding behind the data which reflects the growth in the workers' skill level both in industry and in construction are significant differences in the categorization of workers of the various branches; therefore, it is expedient to conduct a detailed analysis for the separate branches of industry. One can form an opinion on the changes in the average wage category in certain industrial branches from the data in Table 1 [4, 1973, No 11; 1980, No 6; 1983, No 6; statistical materials section].

Table 1. Increase of Average Wage Category for Workers in Certain Branches of Industry

Branch of Industry	1962	1972	1982	Increase of Average 1982 Wage Category over 1962, %
Electric Power	3.3	3.9	4.26	129.1
Oil Refining	3.3	3.9	4.14	125.5
Woodworking	3.0	3.4	3.55	118.3
Construction Materials	3.4	3.5	3.74	110.0

The continuous tendency toward increased complexity of work in the branches of industry and in construction permit one to assume that in the future the average wage category for workers in industry will approach Category 4, and in construction will surpass even that. This testifies to the fact that the majority of the workers will be employed at skilled labor. One must also take note of the fact that in the course of the scientific-technical revolution not only does the proportion of skilled labor increase, but further changes occur in its functions in the direction of increasing its creative nature, its content, and so on.

In addition to analysis of the average wage category on the basis of distribution of workers by wage category, it is possible to group the workers by skill level into three subgroups: low-skilled (Category I and II); skilled (Category III and IV), and highly-skilled (Category V and VI) workers.

Table 2. Changes in the Proportion of Workers at a Certain Skill Level from 1962-1982

Branches of Industry	Proportion of Workers by Category as a Percentage of the Total		
	I and II	III and IV	V and VI
Electric Power			
1962	29.7	50.8	19.5
1972	15.5	49.6	34.9
1982	9.0	43.7	47.3
Oil Refining			
1962	23.9	58.7	17.4
1972	11.6	56.7	31.7
1982	6.9	53.8	39.3
Woodworking			
1962	33.9	55.7	10.4
1972	23.7	57.4	18.9
1982	19.2	59.0	21.8
Construction Materials			
1962	24.3	55.8	19.4
1972	20.8	55.6	23.6
1982	16.4	54.5	29.1

Let us examine the changes in the proportion of workers at a certain skill level in the separate branches of industry (Table 2) [4, 1973, No 11; 1980, No 6; 1983, No 6; statistical materials section]. As seen from the data presented, in the branches which were examined the very same tendency can be traced--an increase in the proportion of the highly-skilled workers and a decrease in the proportion of the low. The proportion of low-skilled labor in such branches as the woodworking and construction materials industries is still very significant, but it is gradually declining. And for industry as a whole, during the period from 1979 through 1982, the proportion of highly-skilled workers increased from 23 to 25.4 percent, and the proportion of workers with low skills for the very same period declined from 26.3 to 23.2 percent, respectively.

Analysis of such kinds of data becomes very significant for future variant estimates of changes in the skill structure of workers in industry and construction. The consistent development of the workers' skill structure and the elimination of unskilled labor, first in industry and in construction and then in other branches of the national economy as well will promote an increase in the efficiency of labor.

According to data from the Scientific Research Institute on Labor, a worker of the highest skill creates 1.5 times more value per unit of time than a worker of the lowest category, while increasing the skill by one category on the average provides a 6-7 percent increase in labor productivity; that is, it serves as an important prerequisite for increasing labor efficiency [5].

The urgent nature of the aforementioned calculations is conditioned by the inconsistency noted recently between the increasing complexity of jobs and the increase in the skill level of the cadres. For example, a similar lag in the machine building branches led to a defect rate of about 70 percent, and a 30 percent rate in equipment breakdowns at machine building plants. The lack of skilled workers at new enterprises is having a severe effect. For example, according to data from a sample survey by the USSR CSA [Central Statistical Administration], about 20 percent of the new industrial enterprises which did not put their industrial capacities on-line in the appointed time were not supplied with skilled workers [6, p 35].

We must point out that our method of grouping workers by skill level is not very sophisticated. The basic grouping should be the level of special training a worker is given to carry out the kind of labor activity appropriate to his level of education. For example, the following classifications of the workers' skill levels are possible: professions of the lowest skill, which do not require any kind of education; skilled labor professions, which require eight years of education and vocational training of up to one year; and highly-skilled professions, for which eight to ten years of education are required and vocational training of one to four years. But such a formulation of the workers' skill categories does not correspond with current accounting practice.

The contemporary level of technology in the majority of the branches requires a higher level of general education and vocational training for the workers. Even today 60 percent of the professions require lengthy continuing education. The system of vocational-technical education is playing a significant and ever-increasing role in improving the workers' vocational training and in increasing their skills.

In 1983, 10.2 million people were trained at vocational-technical educational institutions of the USSR State Vocational-Technical Education System and at departmental vocational schools; of this number, 7.5 million--74 percent--were trained directly at enterprises, organizations and kolkhozes; while 2.7 million--26 percent--were trained at vocational-technical educational institutions and departmental vocational schools [4, 1984, No 11, pp 49-50]. At the present time the system of vocational-technical education is meeting only one-fourth of the demands of the national economy for skilled cadres; therefore, the task for the future consists of completely satisfying the requirement for workers with a certain level of continuing education.

Significant changes in the workers' skill makeup revealed in materials from the popular census reflect progress in the professional-skill structure of the workforce. Census data contain information on one's profession or the work actually performed, and not about one's specialty according to education; nevertheless, these data permit tracing changes in the distribution of the populace according to employment.

During the 20 years since the census, the total number of those employed primarily at mental labor more than doubled, whereas the number employed at physical labor increased by a mere 11.8 percent.

Significant changes which have occurred in the composition of the workforce are reflected in the following figures: in 1959, for every 100 workers employed predominantly at physical labor there were 23 workers employed at mental labor; in 1970 there were 37; and in 1979 as many as 43. One must also note that not only is the correlation between physical and mental labor changing, but the nature of physical labor is changing as well; in manufacturing activities, the activities of the latter are becoming increasingly intertwined with mental labor.

The development of technology, mechanization and automation of manufacturing is leading to positive changes in the professional structure of the workforce in the direction of increasing the proportion of professions which require a higher level of education. The skill level of each professional group has increased significantly of late. The greatest development in this period was gained through the process of expanding the production profile of the workers--combining professions; the appearance of new professions connected with the expansion of the basic directions of scientific-technical progress; and changes in the content of the older professions. The traditional professions, where the level of manual labor is still high, are becoming less and less attractive.

One of the directions in the analysis of the professional-skill makeup of the workforce and its changes is determining the level of mechanization of their labor. At the present time, as is well-known, one worker in three in industry is employed at manual labor; in construction, one in four; and in agriculture--two-thirds of all workers [7, p 93].

The Basic Directions for Economic and Social Development for the Years 1986-1990 and for the Period up to the Year 2000 envisages reducing the application of manual labor and reducing its proportion in the sphere of production to 15-20 percent--which will promote further improvement in the structure of those employed in social production, and the reduction of the proportion of manual laborers.

Reducing the proportion of manual labor on the basis of mechanization and automation of production and the growth of the skill level of the workers is an important resource for further growth in the productivity of social labor. Analysis of the professional makeup of the workforce shows that the most rapid growth is in the number of workers employed at professions of mechanization of labor; in servicing more productive equipment; and in new, advanced manufacturing processes. The number of workers in the so-called integrated professions (machine tool setters, controller-operators, machinists, etc.) is growing at an increasing rate.

The increase in the significance of labor of a higher quality in all branches of the national economy brought about by the scientific-technical revolution is characterized by the increase in the proportion of workers who have a higher level of education. For example, the number of specialists and their proportion in the total number of persons employed in the national economy (Table 3) has grown significantly [4, 1978, No 8; 1983, No 9; 8, p 372]. In the 7th Five Year Plan the increase in the number of specialists amounted to 29 percent of the growth in the total number of persons employed in the national economy; in the 8th, 42 percent; in the 9th, 57 percent; and

in the 10th Five Year Plan, 67 percent. This trend has continued in the 11th Five Year Plan. By the end of the 10th Five Year Plan one in every four persons employed in the national economy had a diploma for higher and secondary special education. There was a significant change in the correlation of specialists with higher and secondary special education and workers at all skill levels. For example, the number of specialists in the national economy with higher and secondary special education per 1,000 workers amounted to 190 in 1960; in 1980, there were 363; and in 1983, 391 persons--that is, the given indicator shows a tendency for growth. As seen from the table, the proportion of specialists which have secondary special education predominates to a certain extent.

Table 3. Ratio of Specialists to the Total Number Employed

	1960	1970	1980	1982
Total Number of Persons Employed in the National Economy, millions of persons	83.8	106.8	125.7	127.9
Total Number of Specialists Employed in the National Economy, millions of persons	8.7	16.8	28.6	31.0
Of this Number, Those:				
With Higher Education	3.5	6.8	12.1	13.0
With Secondary Specialized Education	5.2	10.0	16.5	18.0
Proportion of Specialists to Total Number Employed; in percentages	10.4	15.7	22.7	24.2
Of this Number, Those:				
With Higher Education	4.2	6.4	9.6	10.2
With Secondary Specialized Education	6.2	9.3	13.1	14.0

The modern scientific-technical revolution is expanding the sphere of skilled labor, which presupposes using specialists with a higher educational level. The educational level of workers in all branches of the national economy is steadily increasing. For example, in 1959 only 401 out of 1,000 workers had higher and secondary (incomplete and complete) education; in 1970, there were 590; in 1979, 760; and in 1983, 813 persons [8, p 29].

Significant changes took place during the period since the census, from 1970 through 1979, in the educational level of workers in different professions, employed at physical and mental labor (4, 1983, No 11, p 12). The general educational level of all those employed at physical labor has increased. For example, the proportion of miners who had higher, incomplete higher, and secondary specialized education, increased by a factor of 2.5; and secondary general education, by a factor of 2.2. For construction workers the figures were 3 and 2.5, respectively; and for railroad workers, 2.2 and 2. The proportion of workers in the professions indicated with incomplete secondary education declined by a factor of 1.1.

Among those employed predominately at mental labor an increase can be seen in the number of persons with higher, incomplete higher and secondary special education; and a reduction in the number of those employed with secondary and especially incomplete secondary education. Workers in such spheres of activity as planning and accounting, secretarial work, municipal services, welfare and so on, comprise an exception.

However, a quantitative analysis of the educational level alone will not provide a conception of the correlation of the qualitative changes among the employed to the increase in their numbers. Substantiating for the future the dynamics of social production and its effectiveness requires a consolidated analysis of the volume and the dynamics of the educational potential. The term educational potential is understood to mean the total number of man-years of education for all persons employed in the national economy. In order to calculate the educational potential according to the method we propose, the number of workers in each category is multiplied by the number of years of education received. According to calculations made on the basis of materials from the popular census, the value for the educational potential in 1959 was 637.6 million man-years, while in 1979 it was 916.8 million. In 1979, the educational potential increased by a factor of 1.4 in comparison with the level of 1970, and in the future will undergo further increases in volume.

Contrasting the volume of educational potential and the number of persons employed in the national economy permitted disclosing the tendency for change in the average educational level per worker. From 6.7 years in 1959, it increased to 7.9 years in 1970, and by 1979 had already exceeded 9 years. The continuing tendency toward growth in the average educational level of the workers permits drawing a conclusion on its subsequent future growth. In connection with the introduction of compulsory general secondary education, the increase in its level in the succeeding periods will take place by virtue of higher degrees of education. Calculations of the specific structure of the educational potential based on data from the popular census permits thorough analysis of the changes in the relationship of general and special education (Table 4):

Table 4. Specific Structure of the Educational Potential at the Beginning of the Year, as a Percentage of the Total

Years	1959	1970	1979
Overall Volume of Educational Potential . . .	100.0	100.0	100.0
General Education	91.5	87.4	79.8
Of That Amount, Complete Secondary Education	26.0	40.9	57.6
Special Education	8.5	12.6	20.2
Of That Amount, Completed and Incomplete Higher Education	3.0	4.4	5.7

As seen from the table, the proportion of special education in the educational potential is increasing, and this trend will become more marked in the future.

The analysis conducted showed that the prospects for scientific-technical progress are to an ever-increasing extent predicated by the level of development and by the qualitative improvements in the sphere of education and training of cadres, the conception of which provides the dynamic for the social expenditures for education. Karl Marx noted that "Labor which has a higher significance, and more complex labor, as compared with the average social labor, is a manifestation of the workforce, the education of which requires higher outlays..." [1, p 208].

Calculations show that per-student expenses for education leading to a degree are increasing. At the present time it costs about 200 rubles per year per student at general-educational schools; at secondary specialized institutions, over 700 rubles; and at higher educational institutions, about 1,100 rubles per student. The dynamics of these expenditures also have a tendency for growth; in 1977 they amounted to, respectively, 180 rubles, 650 rubles, and about 1,000 rubles [4, 1982, No 12, pp 62-66; 9, p 408]. The right to a free education in our country is realized through the continually increasing proportion of the national income which goes for educational purposes.

The educational fund, or the cost estimate for the educational potential, is increasing at an even higher rate than its value in terms of man-years of education, since the cost of one year of education increases at each succeeding stage. At the same time the economic effectiveness of investment in education is extremely high. According to estimates by Soviet economists every ruble of additional investments for developing the sphere of education and increasing the level of knowledge provides an additional three to four rubles in national income.

In the future, the significance of retraining cadres and increasing their skills will increase in the sphere of education. Scientific-technical progress complicates the nature of labor, and makes it necessary to continually expand and renew one's knowledge. As is well-known, in conditions of the contemporary scientific-technical revolution the level of knowledge doubles every seven to ten years; for the most important branches of science, every four to five years; and for such sectors as electronics, even every three years. Secondary education is at the present time merely the base which permits continual development of one's general-educational and professional level. Otherwise, the process of obsolescence is inevitable and one's knowledge depreciates either wholly or in part. According to estimates, the average annual norm of obsolescence of knowledge amounts to about five percent a year.

Systematically increasing the skills of the educated populace, and retraining cadres in consideration of changes in existing professions and the appearance of new ones, actively promote the multiplication of knowledge and the acquisition of industrial skills and experience by the workers. Many professions and specialties are being created at the present time on the cutting edge of various technologies; in this connection, the training of specialists and skilled workers with a broad profile, which facilitates rapid adaptation to changing production conditions, is becoming very important. The system of retraining cadres at their positions must also be flexible; in addition, the skilled cadres employed in the national economy must be utilized more effectively.

Improving the educational system and increasing the country's educational potential supports the conclusion that it is precisely this aspect of the reproduction of labor resources that will become increasingly important as a source of economic growth.

Improvements in the economic development of the USSR have served as the basis for significantly raising the educational level of the workers. The output of graduates at various stages of training of cadres is continually increasing (Table 5; [10]).

Table 5. Output of Educational Institutions, in Thousands of Graduates

Years	Higher Educational Institutions	Secondary Specialized Educational Institutions	Vocational-Technical Schools
1960	343.3	483.5	741
1970	630.3	1033.3	1638
1980	817.3	1274.7	2430
1983	849.3	1265.6	2518

The ratio of graduates of higher educational institutions to those from secondary specialized educational institutions and vocational-technical schools was in 1960 1 : 1.46 : 2.16; in 1970, 1 : 1.64 : 2.60; and in 1983, 1 : 1.49 : 2.96. Until recently it was believed that the ratio of specialists in the higher and secondary link should be 1 : 3, but practical experience has shown that it varies depending on the proportions of the branches, and the types and kinds of manufactures. A rational correlation of the number of specialists with higher and secondary specialized education, and above all engineers and technicians, will improve the utilization of work time and will increase labor effectiveness.

It was already noted that the output of skilled workers trained in the system of vocational-technical education has increased significantly; however, it must be pointed out that school training is accomplished for only 1,409 working professions, whereas workers are employed in 6,500 professions in the national economy.

Finding out the real needs of the national economy for manpower with various skills and developing the corresponding form of education is an urgent socio-economic task.

At the present time the system for training cadres does not yet consider in a sufficiently flexible manner the need for training skilled cadres for certain branches; especially these where technical progress is being developed most intensively. The structure and quality of specialist training requires modification.

In future planning the estimates of the needs of the national economy for various categories of skilled cadres must be more fully tied in with the proportional distribution of young people in order to train specialists in the professions which need them. The creation of a comprehensive system for determining the need for worker cadres and for specialists at various levels should take into consideration all the interrelationships among the categories of workers. It must also be noted that industrial needs for certain kinds of skilled cadres must be tied in with the needs of the populace in receiving a certain level of education; the latter receives subjective expression in its needs for the corresponding kinds of education.

It must be pointed out that at the present time the direction of these needs has changed somewhat. Presently less than half of the tenth-grade students polled are oriented toward a VUZ [higher educational institution] education [11, p 14]. In recent decades the number desiring to enter PTU's [vocational-technical school] and technical schools has increased significantly. Accounting for the changes in the desires of the students permits defining more precisely the future needs for manpower at a certain skill level.

At the present time educational development amounts, basically, to fundamental improvement of the qualitative aspects of education.

The decisive turn toward intensification of the economy and the implementation of complex socio-economic programs pose many problems for education. In accordance with the reform which has begun in the general-educational and vocational schools, there is an even greater need for achieving predominance for a subsystem of popular education. Over the course of one or two five-year plans, general vocational training will be added to the general secondary education of the young people. A secondary vocational-technical school with various terms of training will become the basic type of vocational-technical school. The number and the proportion of graduates of the nine-year curriculum which enter secondary PTU's should nearly double in the future.

At the beginning of the 1983-1984 academic year 12.9 million persons were studying at secondary educational institutions; of these 4.7 million, or 36.5 percent, were trained in daytime general-educational schools (with 9-10 year curricula); but the majority of the students, 8.2 million, learned a specialty or a profession at the same time as they received a secondary education. Their structure evolved in the following manner: 30.7 percent studied at night (or shift) general-educational schools (with 9-11 year curricula); 18.3 percent at secondary vocational-technical schools; and 14.5 percent at the regular departments of secondary specialized educational institutions. It must be noted that in terms of union republics, the structure of secondary education has significant differences for the students. For example, in Tajik SSR the percentage of the students who received a secondary education at daytime general-educational schools was greatest--67 percent; and the structure evolved differently from the rest of the country for educating students who learned a profession along with their secondary education--16 percent of the students in the 9th-11th grades studied at night (shift) schools, and 11 percent at secondary PTU's; while only 6 percent studied at the regular departments of secondary specialized educational institutions. The number studying in daytime classes (9th-11th grades) in Turkmen SSR schools was significant--60 percent [4, 1984, No 5, pp 64-66].

For the coming period a solution must be found for the basic problems in the area of education and training of cadres--problems which are associated with the significant changes in the educational structure of the working populace.

Determining the need for specialists at the contemporary level of abundance of specialists is associated with careful analysis of their utilization, which should bring out the regularities and tendencies which have evolved.

It can be said that at the present time the following processes are taking place in the area of utilization of specialists: 1) a reduction in the number of practical workers, who have been replaced by specialists; 2) an for which they were trained; 3) irrational use of specialists (at positions which do not require a given level of education or which do not correspond to the kind of education received; and 4), insufficient control over the distribution of young specialists, since many of them upon graduation from higher educational institutions receive unrestricted diplomas.

Specialists who do not work at their specialty are as a rule dissatisfied with their work; they are not interested in gaining more experience, and as a result either leave their jobs or do not enter into that work when they graduate from the educational institutions. For example, not utilizing an engineer in his specialty not only affects his creative activity as an engineering-technical worker, it also devaluates the state resources used to train cadres with higher education. Experiments in recent years have shown vividly how great is the creative potential of the specialists, and how it is still being insufficiently utilized. At the present time a significant proportion of engineer positions in the national economy are occupied by technicians, when at the very same time graduate engineers are toiling away at non-engineer positions. As investigations have shown, a mere 44 percent of the specialists with secondary specialized education are being utilized at workplaces wholly in accordance with the "List" of Goskomtrud USSR [12, p 60].

In spite of numerous achievements, the educational system is still lagging behind the demands of the times. Research has revealed significant contradictions between the rapid growth of quantitative and qualitative indicators of popular education, and between popular general-educational and popular vocational training; been the growth in erudition and vocational preparation of the young people, and the continued existence of workplaces which require simple labor; and between the needs of society and the social orientation of those who have completed their schooling.

At the present time questions of the quality of education are being solved at all stages of education. For example, as a result of the reform of the general educational and vocational schools, young people who are entering social production will have mastered not only contemporary knowledge, but also the required vocational skills.

A much more acute problem is the reduction of low-skilled and unattractive labor both by virtue of changes in working conditions on the basis of mechanization and automation, and as the result of developing flexible forms of employment for the populace. This is not only an immediate social task, it is also most important in contemporary conditions as the prerequisite for more fully satisfying the needs of the national economy for manpower, and developing it along the path to intensification.

At the present time the "aggregate needs for skilled manpower, the consequences of which have complicated the synoptic evaluation of the necessary combination of structural changes in production and in the composition of

the skilled cadres, as well as the national economic consequences of possible limitations in the training of skilled cadres" [13, p 402], have not yet been studied well.

Projects for forecasting the satisfaction of the long-term needs of the national economy for skilled manpower must consider both the factor of economic development, which is of paramount importance and may be the key to the development of the leading branches, as well as the factors of technologies and the growth of the country's economic potential as a whole. In order to include this factor in national economic estimates, in our opinion it is first of all necessary to develop macroeconomic approaches to analysis of its influence, which embrace the observed structural characteristics of a skilled workforce in their analysis of the scale and the speed of the expected advances; and analysis of the results of resource limitations in a given area and the forms of possible adaptations of the economy to these limitations.

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EDUCATION

CHANGING PRIORITIES DEMAND SPECIFIC TRAINING FOR ECONOMISTS

Moscow SOTSIALISTICHESKIY TRUD in Russian No 4, Apr 86 pp 49-56

[Article by Professor G. Cherkasov, doctor of economic sciences; department head, Leningrad Finance and Economics Institute im. N. A. Voznesenskiy: "Problems and Directions of Improving the Training of Economists"; passages in all capital letters printed in boldface in source]

[Text] Economists...It is difficult to exaggerate the part they play in solving the problems posed by the party in accelerating the socioeconomic development of our society. In their scientific and practical activity, they are called upon to implement the principles and methods of the modern economic mechanism, to actively promote the planned growth of production, the cardinal growth of labor productivity, the more effective use of all social resources, improvements in product quality, and better production relations.

It is therefore natural that the number of economists with higher qualifications is steadily growing, moreover, at a faster rate than the increase in the number graduating from higher educational institutions. Thus, between 1960 and 1984, the graduation of all specialists by the country's higher educational institutions increased by almost 150 percent, while the number of specialists in economic specialties increased by 264.5 percent. In 1960, economists comprised 9 percent of the total number of graduates; in 1984--more than 13 percent.

In our opinion, the task of further increasing the number of economists with higher qualifications continues to be very timely. Nevertheless, the problem of improving the quality of training of these specialists, of improving the syllabuses, work techniques and educational facilities of economic VUZ's.¹ To a considerable degree, the solution of all these questions depends on the proper understanding of the ESSENCE OF A GIVEN ECONOMIC SPECIALTY, THE NATURE OF THE NEED UNDERLYING ITS FORMATION, THE STRUCTURE OF SPECIALTIES, I. E., THEIR COMPLEMENT.

Minvuz USSR [USSR Ministry of Higher and Secondary Specialized Education] prepared a list of specialties [spetsialnost] and areas of specialization [spetsializatsii] offered by VUZ's in the USSR, that contains certain groups of specialties, their designation, and a brief definition of the specialist's qualifications.² Economic specialties and areas of specialization are presently combined list. They number almost 110. It should be noted that out of this number,

over 50 areas of specialization hold significance only for the internal organization of the work of economic VUZ's, while only the specialty as a whole is taken into account in planning the training and assignment [raspredeleniye] of specialists. Nor are areas of specialization by any means always reflected in the recently approved qualification descriptions [kvalifikatsionnye kharakteristiki] of economists in a certain specialty, which are supposed to be the basis for the planning of specialist training and for forecasting the need for them. For example, the list indicates six areas of specialization for specialty 1734 ("finance and credit"), but not one of them is even mentioned in the qualification description approved by USSR Minvuz Order No 1050 dated 12 October 1982. The same can also be said about specialty 1704 ("the economics of labor") which calls for specialization in the economics of labor resources. But let us turn directly to the content of the list itself.

It is based on two principles that are used in the definition of an economic specialty--the function of economic activity (an economist) and the branch of the national economy (engineer-economist). According to the functional principle, the economist in all branches and in national economic organizations at various levels performs one and the same function. He must learn it in the VUZ, while he must master the specifics of a given branch in the course of his practical activity. Such, for example, are specialties 1701 ("national economic planning"), 1702 ("industrial planning"), 1703 ("economics and planning of material-technical supply"), and 1704 ("economics of labor").

The branch principle assumes that the most important consideration for an economist is the mastery of the technology and organization of production in a specific branch and that he must master and perform them depending on the actual requirements of his position. Typical examples of engineer-economist qualifications: 1706 ("economics and organization of oil and gas industry"), 1713 ("economics of cinematography"), and 1722 ("economics and organization of a municipal economy").

Is it appropriate to raise the question as to which of the principles referred to above is better? It seems that both of them have the right to exist and that the principal methodological task is not to prove that one of them is superfluous, but is rather to secure the sensible combination of both of them in the interest of securing the most complete and precise reflection of the current and simultaneously changing needs of the national economy.

Unfortunately, USSR Minvuz's many years of work with the list have led to the greater complexity of its methodological principles and especially to inconsistency and even confusion. How else, for example, can one assess the discrepancies that exist in the definition of the qualifications of an economist given the same basic point of departure? Thus, specialists who are trained not only according to the functional principle (see examples above), but in certain branches as well--procurement of agricultural products (specialty 1707) and trade (1729)--have the qualification "specialist."

According to the list, the qualification "engineer-economist" is assigned to certain branch specialties; another qualification is supposedly needed for other, essentially similar specialties. Let us compare the following branch specialties.

1705--economics and organization of the mining industry; qualification--mining engineer-economist;

1707--economics and organization of power production; qualification--engineer-economist;

1713--economics and organization of agriculture; qualification--economist-organizer of agricultural production;

1723--economics and organization of rail transport; qualification--engineer-economist of rail transport;

1724--economics and organization of water transport; qualification--engineer-economist;

1727--bibliology and organization of the book trade; qualification--bibliographer-organizer of the book trade;

1732--merchandising and organization of trade in manufactured goods; qualification--merchandiser with higher qualifications.

In all cited branch economic specialties, the point at issue is unquestionably the economics and organization of the branch. However, for seven allied specialties there were six variants of qualifications with their features. What is more, from the list one can learn that one and the same branch, let us say, machine building (and not only it alone!) requires engineer-economists specializing in the economics and organization of the machine building industry (specialty 1709) and engineer-economists specializing in the organization of the management of production in the machine building industry (specialty 1745).

There are also economic specialties outside Group XVII; some of them are similar to an "economic-branch centaur." For example, within the framework of specialty 1905 in Group XIX (health and physical culture) there is specialization in the organization and economics of pharmacy with a course in NOT [scientific organization of labor] and computer technology conferring the qualification of pharmacist (!?). Group XX (university specialties) now includes specialty 2035 ("economic cybernetics") that should confer the interbranch qualification of "mathematical economist." In itself such a qualification is very remotely linked to the functional use of specialists because there are no corresponding duties in state government bodies or in scientific institutions. But matters were complicated still further when a branch area of specialization--economic cybernetics in agriculture--was

created in this specialty. Such indeterminacy in the specialization of specialists inevitably leads to clear difficulties in the use of specialists in specific work places and positions and creates serious difficulties in the assignment of graduates.

The cited examples do not exhaust all the shortcomings that have built up over a number of years in the process of continuous "improvements" in the list of economic specialties. Numerous discussions at conferences and in the press have also frequently pointed out the excessively narrow content of individual specialties that lead to an unduly large number of them, the absence of serious uniform foundations for the establishment of areas of specialization, and subjectivism in the formation of new specialties. The latter, in particular, is very typical of a number of relatively new specialties that originated as a response to the latest demands for the development of the national economy. Thus, training in specialty 1731 (international economic relations) is offered in three essentially different specialties, but a single qualification is assigned that takes special note not of a function or the capacity for management, but rather of a knowledge of foreign language--"economist with a knowledge of a foreign language, specializing in international economic relations."

In order to overcome the shortcomings indicated above, it is necessary to clearly define the purpose and fundamental principles underlying the formulation of the list. We note first of all that the LIST IS ABSOLUTELY NECESSARY AS A UNIQUE MURAL OF THE PRODUCT "MIX" OF HIGHER ECONOMIC SCHOOL. It shows the kind of cadres that the higher school prepares for the national economy and reveals the content and particulars of their qualifications. The national economy's need for these cadres and the possibility of satisfying it are reflected in other documents in accordance with the list: plans for training and allocation, contracts, etc. The list is the primary initial document and its elaboration must be carried out with the coordination of the higher school and state--planning, branch, departmental, territorial--bodies that have an interest in cadres. To this group, we should also add social organizations which, as is known, in accordance with the Constitution of the USSR, have certain property of their own, carry out complex activity, including economic activity, and consequently also need certain economic cadres.

It appears that THE INITIATIVE IN DETERMINING THE QUALITATIVE CHARACTERISTICS OF THE NECESSARY CADRES (BREADTH OF SPECIALIZATION, SUITABILITY FOR VARIOUS BRANCHES, GROUPS, POSITIONS) MUST BELONG TO BRANCH AND FUNCTIONAL ORGANS THAT ACCORDINGLY FORMULATE THEIR "MANDATE" TO THE HIGHER SCHOOL REGARDING THE QUALITY AND NUMBER OF CADRES THAT IT MUST TRAIN. The higher school, in turn, must be dynamic in its reaction to this mandate and must proceed from its actual material and other resources, the potential for their multiplication (inter alia, by interested branches), the experience accumulated in training specialists, in using them in the national economy, etc. As a result, a base is formed for state forecasts and for planning the training and assignment of cadres. Thus, the need for change in improving the structure of the training of economists is obvious.

Let us examine in this regard the objective basis of the occupation of the economist as a specialist whose function is to provide economic management of social development. The existence of society's economic basis--a system of socioeconomic relations that embraces all spheres of social reproduction--production, distribution, exchange, and consumption (including both material production and the nonproductive sphere)--is such an objective basis. The economic relationships and laws are closely associated with society's productive forces and also with the social relationships and laws of social development. All this combined forms a super-complex system that absolutely cannot be perceived directly and all the more so by the simplest methods, which presupposes the need for the scientific cognition and definition of the goals, forms and means of the necessary changes. In their aggregate, the structure of these tasks and the modes of solving them must be embraced by the system of economic sciences, the creation of which is still in the stage of animated discussion.³

At the same time, it seems to us an indisputable fact that THE EXERCISE OF A CERTAIN SOCIALLY NECESSARY FUNCTION PERTAINING TO THE COGNITION AND CONSCIENTIOUS USE OF ACQUIRED KNOWLEDGE FOR THE MANAGEMENT AND PROGRESSIVE REFORM OF ECONOMIC RELATIONS IN THEIR TOTALITY, COMPLEXITY AND INTERRELATIONSHIP WITH TECHNICAL AND SOCIAL RELATIONS IS THE CONTENT OF THE ECONOMIC PROFESSION.⁴ It is possible to see various ramifications in the economic profession in two interconnected directions: (1) the transition from one level of social organization to another; and (2) the division of the most common integrated functions into a number of more particular functions..

It is obvious to everyone that the most general economic function formulated above is embodied in the economic specialty "political economy." Here the name of the specialty traditionally coincides with the name of the science. Nevertheless, a specialist in political economy may engage in purely scientific activity in the methodology and the political economy of capitalism or socialism or other social formations, may teach at an institution of higher learning, or may even occupy a position in a state institution, using his position and the methods of political economy to elaborate very specific management decisions that comprise the basis of political or economic-political activity.

The complexity, large volume, and qualitative diversity of information on economic relations; the duration and lack of uniformity of various processes; the different character of possible management decisions; the need for their maximum concreteness and effectiveness with regard to the rate of social progress inevitably cause--in addition to the foregoing--differentiation of the general function of an economic profession into a number of particular professions and, in this connection, the identification of a number of relatively independent and stable types of economic activity--economic specialties. ALL BASIC ECONOMIC FUNCTIONS IN MOST GENERAL FORM CAN BE PRESENTED IN THE FORM OF THE FOLLOWING FIVE:

1. Cognition (investigation) of socioeconomic relations and the elaboration of principles, avenues and mechanisms for improving them.

2. Collection, processing and ordering of data on economic processes and phenomena.
3. Analysis of the course and results of economic activity, evaluation of its successes and possibilities of improvement; monitoring fulfillment of plan and managements.
4. Forecasting, long-term and short-term planning of economic and social development.
5. Organization of the effective functioning of various elements of the economic mechanism in order to optimize the use of natural and social resources: material, labor, monetary.

We note that the formulation of economic functions is a separate, quite complex scientific task. We cite approximate rather than final definitions. In particular, each of the represented functions can be viewed as a whole that is defined in most general form or as a block or group of allied subfunctions. For example, from function 5 it is possible to single out the subfunction "organization of the effective use of labor resources" (at the present time, this is essentially the area of activity of economists trained in specialty 1704--the economics of labor). This subfunction in turn can be presented in even more detailed form: (1) determination of the need for labor resources and the planning of their use; (2) organization of the labor activity of various categories of working people (blue collar workers, engineering-technical personnel, etc.), including the selection of forms of organization, the norming of labor and wages with due regard to the criteria of a technical, economic, sociological, and psychophysiological character; (3) evaluation of the effectiveness of the organization and planning of labor (calculation of labor productivity, utilization of working time, labor intensiveness, effectiveness of utilization of labor of various sex and age groups, etc.); (4) organization of the socioeconomic development of labor collectives with respect to a number of quantitative and qualitative parameters, etc.

THE NOTION AS TO WHAT COMPRISES THE CONTENT OF ONE OR ANOTHER ECONOMIC FUNCTION IS THE BASIS FOR DEFINING A SPECIALTY OR AREA OF SPECIALIZATION. AND HERE TOO THE DECISIVE WORD BELONGS TO THE STATE (OR SOCIAL) FUNCTIONAL BODY THAT IS CARRYING OUT A CERTAIN TYPE OF ACTIVITY ON THE SCALE OF THE NATIONAL ECONOMY. Thus the area of specialization "economics of labor resources" was introduced more than 10 years ago within the framework of the specialty "economics of labor" at the initiative of the USSR State Committee for Labor and Social Problems and several years ago a new specialty--1753 (organization and norming of labor) was established. In both cases, the recognition of the special importance of one of the particular subfunctions was the basis. It should be noted in general that the emergence of new economic specialties has up to now been due to the necessity of singling out some one special function. Thus, in the 60s, function 2 was the basis for (interbranch!) specialty 1738 (organization of mechanized processing of economic data); in the 70s, a group

of branch specialties was established for organizing the management of production in a certain branch (basis: function 5); the 80s saw the emergence of specialty 1739 (auditing and monitoring), which reflected the significance of function 3.

It seems to us that the CONTENT ANALYSIS OF ECONOMIC FUNCTIONS IS BY NO MEANS ENDED BUT WILL ALWAYS BE AN ONGOING PROCESS reflecting the historical stages of social development and the new qualitative tasks that arise before the national economy. Thus, we believe that CERTAIN NEW SPECIALTIES SHOULD BE CREATED UNDER THE PRESENT CONDITIONS OF INTENSIFICATION OF THE ECONOMY AND THE INCREASED SIGNIFICANCE OF RESOURCE UTILIZATION AND THAT THE NAMES OF SOME OF THE OLD ONES SHOULD BE RE-DEFINED (IN THE LIGHT OF NEW TASKS). For example, the specialty "organization of the effective use of natural resources" should be created on the basis of function 5. The same basis should be used for transforming the specialty "economics of labor" into "organization of effective use of labor resources"; for transforming the specialty "economics and planning of material-technical supply" and "economics and organization of procurement of agricultural products" into the specialty "organization of the effective use of material resources"; and for transforming the specialty "finance and credit" into the specialty "organization of the effective use of finance and credit resources."

In our view, the problem of enlarging a specialty must be resolved through the mandatory differentiation of areas of specialization. It can be considered that specialization is such a particular subgroup of economic activity that is not amenable to further division. For example, from the standpoint of current views, it is evidently impossible to divide the concepts "organization and norming of labor" into specialized types of activity: "organization of labor" and "norming of labor." It would seem that each specialty must necessarily be represented in the form of several areas of specialization that quite completely encompass the content of the specialty in their aggregate.

This functional approach to the definition of an economic specialty, while making it possible to identify a number of important qualitative parameters, does not make it possible to formulate the area of specialization and qualification of the specialist since it does not presuppose the determination of the object of application of the function and the determination of the main particular in the character of its application. Thus, problems pertaining to the effective utilization of labor resources can be addressed on a research or practical plane. Work in this area can be performed at various levels of duty and in its application to the entire national economy, to regions, individual spheres, branches, or enterprises. In our opinion, it is impossible to consider all these particulars in the list of economic specialties (even though they must in one way or another be taken into account in the planning of specialist training), but it is nevertheless necessary to single out the main feature that characterizes the application of an economic function.

Here, it is first of all necessary to determine the object of activity that must be the basis of USSR Gosplan's classification of branches of the national economy because it is specifically one of the bases of all types of planning.

At the same time, the classification of objects of economic activity may be more complete or may presuppose one or another amalgamation of certain branches. In enlarged form, it may appear as follows.

CLASSIFICATION OF OBJECTS OF ECONOMIC ACTIVITY (BY LARGE BLOCKS)

1. The world economy and international economic relations in general.
2. The world capitalist economy in general.
3. The world socialist economy in general.
4. The economics of the developing countries in general.
5. The USSR's international economic relations.
6. The USSR's socialist economy in general.
7. The sphere of the USSR's material production in general.
8. USSR industry in general.
9. USSR agriculture in general.
10. Other branches of material production and types of activity in the sphere of material production.
11. The USSR nonproductive sphere in general.
12. Branches of the nonproductive sphere.
13. Government/management [Upravleniye].
14. Party and social organizations.

Since all possible objects are represented in the proposed system in one way or another, there is no need to have certain economic specialties in other groups (for example, political economy and economic cybernetics in Group XX--universities). The principal decision is made, on the basis of expert assessment by state planning and departmental bodies and the higher school, on the coordination of a certain functionally determined specialty with the appropriate object and on the establishment of the main features of the area of specialization of the specialist under training on this basis. Let us assume within the framework of the specialty "organization of the effective use of labor resources," the area of specialization "economics and management of the labor potential" and "organization of the socioeconomic development of the development of labor collectives" are evaluated as relating to the USSR socialist economy in general, while "labor organization and norming" is related to all branches of material production and the nonproductive sphere.

For each specialty and possibly for each area of specialization as well, it is advisable to define the substantial feature of the qualification of the specialist. It is possible to propose three types of qualifications of economists with higher education that are characterized a number of features that are reduced to tabular form.

The list of economic specialties must incorporate the following features:

--the number and name of the specialty and the areas of specialization comprising it;

--a detailed description of the training of the specialist in the specialty and area of specialization;

--a definition of the qualifications required for a specialty in general or for the areas of specialization comprising it;

--a reference to the protocol for the coordination of a given specialty or area of specialization by USSR Minvuz, USSR Gosplan and the department interested in the specialty. The latter assumes responsibility both for the description of the specialty, the qualification, and the object of application of specialists and for the calculation of the need for them and their total use for their intended purpose.

Basic Types of Qualification of Economists With Higher Education

Type of qualification	Basic functions performed by specialists	Where specialists are used in national economy	Main areas of training in VUZ	Assignment of persons w/given qualifications to existing specialties
Economist-researcher	Research on economic laws & mechanism behind their effective use	Scientific institutions studying world & socialist economy in general; central/social bodies	Broad theoretical training w/limited practical activity	Political economy, economic cybernetics
Economist-analyst	Processing and analysis of socioeconomic information w/ the aim of making broad spectrum of management decisions	Central, regional, departmental & branch bodies of state management; enterprises of all branches & departments	Special attention to mathematical-statistical and economic-analytical training	Statistics, accounting, auditing, monitoring

Basic Types of Qualification of Economists With Higher Education (Continued)

Type of qualification	Basic functions performed by specialists	Where specialists are used in national economy	Main areas of training in VUZ	Assignment of persons w/given qualifications to existing specialties
Economist-organizer	Organization of effective use of social resources based on application and improvement of specific forms and methods of economic mechanism	Central, regional, departmental and branch bodies of state management; enterprises of all branches & departments	Practical organizational techniques based on general theoretical & analytical training and knowledge of specifics of individual branches of their groups	(1) Economics of labor; finance & credit; economics & planning of material-technical supply (2) Economics and organization of branch (machine building, agriculture, construction, etc.

Naturally, the principles set forth above do not claim to be perfect. They define possible directions for the substantiated reform of the training of economic cadres--a national economic problem that is long overdue.

FOOTNOTES

1. This group of questions has found reflection in the Guidelines for Elaborating the Conception of the Further Development of Higher Economic Education, prepared by a commission of USSR Minvuz and approved by the a decision of the ministry's collegium. See EKONOMICHESKIYE NAUKI, No 8, 1984. The author of the present article participated in the preparation of this document.
2. Hereafter referred to as 'the list' for the sake of brevity.
3. See VOPROSY EKONOMIKI, No 8-12, 1985.
4. From this it follows that an economist is a representative not only of a certain aspect of economic science, but also of practical economic management activity, which is richer and more complex than an individual science since it is carried out on the basis of that science's laws in the form of integration of the knowledge and methods of other sciences. We make this note because the aggregate of economic specialties is

sometimes directly linked only to the system of economic sciences.
See G. Popov, "On the System of Economic Sciences," VOPROSY EKONOMIKI,
No 8, 1985, p 75.

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DEMOGRAPHY

RESULTS OF 1985 DEMOGRAPHIC CENSUS STUDY

Moscow VESTNIK STATISTIKI in Russian No 6, Jun 86 pp 55-62

[Article under rubric "To Help the Agitator and Propagandist": "Basic Results of the 1985 Special-Demographic Sampling Study of the Population of the USSR"]

[Excerpt] The center of attention of our party has always been questions of special policy and concern for mankind.

"Materialy XXVII syezda KPSS" [Materials of the 27th CPSU Congress], Moscow, Politizdat, 1986, p 44.

State organs of statistics have carried out a social-demographic census study of the population with regard to the situation as of 1 January 1985. In accordance with a program developed jointly by the USSR State Planning Committee, interested ministries, departments, and scientific organizations, more than 13 million individuals were questioned.

On the date of the study, 90.9 percent of the inhabitants of the country who were questioned were living in families. The other 9.1 percent of the population were individuals living apart from their families (mainly students) and single people. The average size of a family consisting of members living together was 3.5 individuals. This figure was the same in the data of the 1979 All-Union Census of the Population. Average family size broken down by union republics varied from 3.1 individuals in Estonia to six individuals in Tajikistan. More than 75 percent of the families in our country consist of between 2 and 4 people.

The results of the study make it possible to characterize the current results of implementing measures called for in a CPSU Central Committee and USSR Council of Ministers decree of 1981 concerning stepping up state aid to families with children and giving working women the chance to better combine maternity and participation in social production. According to the data of the study, out of the working or studying women who gave birth to children in 1983 92 percent had been given the right, granted by this decree, to take a year's leave (partially paid) or a half-year's free leave to care for the child. During the year after the introduction of these privileges, the relative proportion of second children born to single-child mothers in their first marriage increased by 12 percent, third children among those already having

two children by 14 percent, and fourth children among those already having three children by 10 percent. This increase was higher for women in urban areas than those in rural areas.

The basic directions of economic and social development of the USSR for 1986-1990 and the period up to the year 2000, confirmed by the 27th CPSU Congress, call for further expanding aid to families with children, improving labor and domestic conditions for women, increasing the duration of partially paid leave for mothers to care for a child, and developing a network of special preventive clinics for pregnant women.

A comparison of the results of the 1985 social-demographic census study of the population and the 1979 census of the population shows that during this period, in connection with the higher birth rate, the proportion of families consisting of four and five individuals increased. There was also a certain increase in the number of families consisting of two individuals, which was caused to a substantial extent by the division of extended families, in connection with improved housing conditions. The specific proportion of families consisting of three individuals decreased in the interval 1979-1984, while the proportion of large families consisting of six or more individuals remained approximately at the 1979 level.

The specific proportion of families with a single married couple decreased, and those with two or more married couples increased, which is connected mainly with the changed age structure of the population. Fairly numerous generations of young people born in the late 1950's and early 1960's grew to marriage age in the late 1970's and early 1980's. In addition, the average age upon getting married for the first time decreased. As a result, many young married couples are continuing to live with the parents of the spouses.

The distribution of families according to type and average family size in 1979 and 1985 are characterized by the data presented in Table 1.

Table 1

	Percent of Families		Average Number of Individuals in Family	
	<u>1979</u>	<u>1985</u>	<u>1979</u>	<u>1985</u>
All families	100	100	3.5	3.5
Including families consisting of:				
A single married couple with or without children	66.1	64.3	3.3	3.3
A single married couple with or without children, one of the spouses' parents, and with or without other relatives	13.3	13.0	4.7	4.6
Two or more married couples with or without children, one of the spouses' parents, and with or without other relatives	4.3	6.0	6.3	6.4
Mothers (fathers) with children, and one of the mother's (father's) parents	13.7	13.7	2.6	2.5
All other families	2.6	3.0	2.9	2.9

In the segment of the studied population consisting of those people 16 years old or older, 73 percent of the men were married and 59 percent of the women. Approximately 65 percent of the married men and 69 percent of the married women were in the age range from 20-49 years. Most of them had married at a young age. In the generations born after the Great Patriotic War, more than half of the women had married by the age of 22 and more than half of the men had married by the age of 24. Women were most often married when 19-21 years old, and men, 21-23 years old.

In the postwar period, the age of entering on first marriages decreased. Among those born in 1930-1934, half of the women had married by the age of 23 and half of the men by the age of 25, while among those born in 1955-1959 almost half of all men and women married by the age of 21 and 23, respectively. Compared to the 1979 census, the number of married men increased by 3.3 percent, and the number of married women by 1.4 percent.

The number of men who have never married totaled 21 percent, while that figure for women is 15 percent. Most of them were under the age of 25. Compared to the 1979 census, the specific proportion of never-married individuals decreased.

In the process of implementing universal compulsory secondary education of young people, the number of people with higher education and completed secondary education is increasing. Currently, out of every thousand members of the population aged 10 years and older, 701 individuals have higher education or secondary education (completed or in process), and out of these 509 individuals have higher education or a completed secondary education (specialized or general). Compared to 1979, the number of such individuals per 1,000 has increased by 10 and 28 percent, respectively. The proportion of individuals with higher and secondary education among the working population is higher than among the entire population. Out of every thousand individuals employed in the economy, 883 individuals had a higher or secondary education (completed or incompleted) on 1 January 1986, which is 10 percent higher than in 1979. The number of working people with a primary education or less went down by 40 percent in comparison with the 1979 census. But 15 percent of working people and more than one-quarter of all kolkhoz members still have this level of education. Education is increasing among both men and women. Moreover it is increasing faster for women than for men. The levels of education in rural and urban population have come closer together. The proportion of individuals with higher and secondary education (completed or incompleted) in urban areas increased in 1985 by 5 percent as compared with 1979, while in rural areas the increase was 20 percent.

One of the essential social-demographic characteristics of the population is the distribution of all inhabitants into groups working or not working in social production. In the Soviet Union unemployment was eliminated in 1930. The complete employment of the population achieved is the enormous advantage of the socialist system of economy over the capitalist system. In the USSR, as attested by data of the 1985 study, the proportion of people employed in enterprises, establishments, and organizations was 52 percent. The other 48 percent of the population are pensioners, people on stipends, or dependents of specific individuals.

Compared to the 1979 census of the population, the specific proportions of these groups changed as follows (in percent of the total):

Table 2

	<u>1979</u>	<u>1985</u>
Total population	100	100
Those employed in the economy	51.5	51.8
People on stipends	2.5	2.5
Pensioners, people receiving assistance, and other individuals supported by the state	15.3	17.1
Dependents of specific individuals, and also those employed on private subsidiary farms	30.6	28.6
Those having other sources of support and those who did not name their sources	0.1	0.0

In the structure of the population by sources of support, the specific proportion of pensioners and other people supported by the state increased. This is connected with the increased number of people of pension age still alive. The number of pensioners increased from 47.6 million in 1979 to 54.6 million in 1985. The age for pensions is set at 60 years old for men and 55 years old for women. Workers and employees engaged in jobs underground, in high-temperature shops, and also in other jobs involving difficult labor conditions, receive a pension from 5-10 years earlier. The reduced pension age is also being expanded to other groups of the population. In most capitalist countries, the age for receiving pensions is higher than it is in the USSR. Thus, for example, in the United States, the FRG, the Netherlands, and Sweden, the age established for receiving pensions is 63-65 years old for men and women, and in Norway--67 years old. At the same time, in order to receive an old age pension, substantial sums are withheld from the wages of working people in the capitalist countries in the form of insurance payments. Pension support in the USSR is carried out using state and kolkhoz funds exclusively.

In the course of the study, data was obtained on the length of time spent by the population in a place of permanent residence. Throughout the country as a whole, 57 percent of those questioned reported that they had lived in their place of permanent residence continuously since birth, and 43 percent of the population had changed their place of residence.

The distribution of the population which has not lived in a place of permanent residence since birth, broken down by duration of residence, is characterized by the following data (in percents of total):

Table 3

	<u>Total Population</u>	<u>Urban Population</u>	<u>Rural Population</u>
Total population which has not lived in a place of permanent residence since birth	100	100	100
Including those who have resided there:			
Less than 2 years	11.4	10.2	15.1
2-5 years	16.7	15.6	20.0
6-9 years	11.8	11.4	13.1
10-14 years	13.2	13.2	12.9
15 years or more	46.9	49.6	38.9

As compared to the 1979 census of the population, the proportion of people living continuously for 10 years or more in a new place rose from 53 percent to 60 percent. The specific proportion of those residing there for less than this period decreased. The proportion of individuals living in a new place for less than 2 years decreased especially noticeably—from 16.3 percent in 1979 to 11.4 percent in 1985. This testifies to the reduced intensity of migration, which is primarily connected with the implementation of measures to further improve residential and cultural-consumer conditions for the population.

The basic directions of migration were moves from the country into cities (40 percent) and from the city into rural areas (34 percent). Moves from one rural location to another totaled 19 percent, and from a city to a settlement totaled 7 percent.

During recent years the outflow of the population from the countryside into the cities decreased.

Active migration is observed in the RSFSR, the Ukraine, Belorussia, Kazakhstan, and the Baltic republics, where the specific proportion of persons who have changed their place of permanent residence varies from 41 percent to 61 percent.

The segment of the population capable of working is the most mobile. This segment accounts for 69 percent of all persons who changed their place of residence.

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DEMOGRAPHY

FIGURES ON POPULATION CHANGE IN USSR FROM 1917-1985

Moscow ARGUMENTY I FAKTY in Russian No 22, 27 May-2 Jun 86 p 5

[Unattributed article: "Urban, Rural Population Change in USSR"]

[Excerpt]

<u>Years</u>	<u>Population (beginning of year; million persons)</u>			<u>Total Population Percentages</u>	
	<u>In all</u>	<u>Including</u>		<u>Urban</u>	<u>Rural</u>
1917	163.0	29.1	133.9	18	82
1939	190.7	60.4	130.3	32	68
1950	178.5	69.4	109.1	39	61
1959	208.8	100.0	108.8	48	52
1970	241.7	136.0	105.7	56	44
1979	262.4	163.6	98.8	62	38
1982	268.8	171.7	97.1	64	36
1983	271.2	174.6	96.6	64	36
1984	273.8	177.5	96.3	65	35
1985	276.3	180.1	96.2	65	35

Urban population growth in the early postwar years can be explained by the fact that especially during this period, restoration work was conducted in towns destroyed during the war. In subsequent years, the tempo of urban population growth decreased; from 1959-1969, the number of city and urban-type settlement dwellers increased, in a year's time, on the average, by 2.8% and from 1970-1979 by 2.1%. During these periods, 109 and 35 towns were formed respectively, while the number of urban-type settlements increased to 379 and 196.

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GENERAL

MORE STATE BENEFITS OWING TO FAMILY SIZE RECOMMENDED

Moscow SOVETSKAYA KULTURA in Russian 8 Feb 86 p 3

[Article by A. Milovidov, Candidate of Economic Sciences: "How Many Children Do You Have?" Text rendered in all capital letters appears in boldface in original]

[Text] Over the last 15 years the national wealth of the country (without the value of land, mineral resources and forests) has increased 2.5 times, while the size of the population has increased 15 percent. At present 278 million Soviet people own wealth in the sum of 3.4 trillion rubles, which on the average amounts to 50,000 rubles per family, of which 10,000 represents the value of domestic property.

Analysis shows that the most appreciable "contribution" to our national wealth was made, as a matter of fact, by generations born after the war.

Undoubtedly, the contribution of the presently rising Soviet generations will be even more impressive, which is evidenced by two facts cited in the draft of the new wording of the CPSU Program: by the end of the year 2000, a doubling should be achieved in the productive potential of the country, with its radical qualitative renovation, and in the next 15 years it is planned to double the volume of resources aimed at satisfying the requirements of the people.

At the same time, it seems that the ratio between the growth in national wealth and the growth in human resources should be more carefully studied in the future. We should learn from the experience of the aggravated demographic situation in the country that began from 15 to 20 years ago. Thus, an excessive reduction in the birthrate can lead to a reduction in the size of the population in the relatively near future, first and foremost in the RSFSR, in the Ukraine, in Byelorussia and in the Baltic. It is here that the outflow of rural youth to the city has disrupted the age pattern and has caused a shortage of workers in the mass rural occupations. Not everything was going well with the qualitative indices either, in particular with average life expectancy, first of all of men.

This kind of question also arises: Again because of a lack of people, will there not be a lag in the rates of assimilating the vast northeastern regions

whose natural wealth is now increasing the might of the country? So it is inevitable that in the future we will be required to solve complex problems for ensuring a more coordinated development of the economy and the population.

Part of the problems are already being solved--within the limits of the realization of specific measures of the social program adopted by the 26th CPSU Congress. A combination of special measures has been developed scientifically and implemented practically. An especially favorable effect has been noted in the introduction of partially paid leave for looking after babies until they are one year old, and retaining for the mother the right to her former place of work for up to one and a half years.

Although not that much time has passed from the moment the measures were introduced, a number of useful conclusions can now already be drawn. The number of children being born in the country in the postwar period was the most substantial in the years 1983-1984. And this increase was maintained last year, despite a gradual deterioration in the structure of the contingent of women giving birth. These results are also valuable in that they act as a counterbalance to the beginning structural deterioration connected with the recurrent "demographic echo" of war. In addition, the quota of second and third children in families in the RSFSR, UkSSR, BSSR and the Baltic republics has now noticeably increased. The most appreciable rise in the birthrate in these republics occurred in rural localities, which can also be associated with the first reassuring socio-demographic results of the implementation of the Food Program. Even the outflow of youth from the countryside has decreased, and a return of people to the village has already been seen in a number of places.

Can these improvements be regarded as a return to the family child average. Apparently, it is early to speak of this, and a more prolonged period of observation is necessary. Nonetheless, it will be necessary in the future to achieve a consolidation of all observed trends by all available means. In this connection, the increase in partially paid leave and the resolution of housing problems, etc., contemplated in the draft of the Basic Directions for the years of the Twelfth 5-Year Plan, will have great significance.

But it is necessary right now to assess the consequences of innovations in order to coordinate them with economic possibilities. Thus, an increase in leave will cause an outflow of part of the labor resources to housekeeping. THEREFORE, TO ALLEVIATE THIS TENSION, IT IS ADVISABLE TO PERMIT NONWORKING MEMBERS OF A FAMILY, FIRST OF ALL GRANDMOTHERS, TO RECEIVE AN ALLOWANCE FOR TAKING CARE OF BABIES. Such a practice exists abroad. Why should we not make use of it?

It is especially necessary to speak of the more purposeful utilization of state resources for family allowances. In our opinion, TO REINFORCE THE INCENTIVE ROLE OF STATE ALLOWANCES, IT IS ADVISABLE TO DEVELOP A FLEXIBLE SINGLE FAMILY ALLOWANCE SCALE IN CONNECTION WITH THE BIRTH OF A BABY. Allowances for pregnancy and childbirth should constitute its base, and also allowances for taking care of newborn children. It is not required that other types of allowances be designated, since they should be taken into account in a single allowance in one way or another. Further, in basing the allowances

scale, it is important to do it in such a way that the length of leave for taking care of a baby and the size of the allowance would depend on the order of priority of the birth of a baby in a family. Considering that reproduction of generations on a simple scale requires that the predominant number of families have two or three babies, it follows, in our view, that maximum state assistance be concentrated on precisely such families.

The single family allowance system, as presented, should be introduced throughout the territory of the country, regardless of the currently existing differences in population reproduction. And indeed, all measures for putting the system into effect, apparently, should be implemented simultaneously, and not in stages in one to two years, as took place at the beginning of the 80's.

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CSA DEPUTY CHIEF OUTLINES CATEGORIES FOR SOCIAL RESEARCH

Moscow VESTNIK STATISTIKI in Russian No 5, May 86 pp 3-10

[Article by V. Guryev, USSR Central Statistical Administration deputy chief: "Tasks for Social Statistics in the 12th Five Year Plan"]

[Text] The Communist Party of the Soviet Union and the Soviet Government consider social policy a powerful means for accelerating the country's socio-economic development, for elevating the labor and social activeness of the masses, and for the formation of a new man. It is the affirmation of the socialist way of life. The most important feature of this policy is its concern for the material and spiritual life of man.

A detailed description of the party's social policy was provided in the materials of the 27th CPSU Congress, which defined its goals and tasks for the 12th Five Year Plan and for the period up to the year 2000. Solving the problems posed envisages steady improvement in the working and living conditions of the Soviet people; the fullest realization of the principle of social justice in all the basic spheres of the peoples' vital activity; strengthening the bonds of the working class, the peasantry, and the intelligentsiya; overcoming the existing differences between mental and physical labor, and between the city and the country; perfecting national relations, and further solidifying the fraternal friendship of all the nations and peoples of our country.

It is planned to raise the material and cultural living standards of the Soviet people to a qualitatively new level; to provide for growth in the real income of the workers; to improve the material situation of pensioners and invalids; and to solve the social problems in the spheres of labor, everyday life, education, vocational training and culture, and in the organization and taking of leisure.

A most important task for social policy is strengthening the family, and conducting an effective demographic policy directed toward increasing the longevity and the labor activeness of the Soviet people. One of the prerequisites for solving these problems is establishing working and living conditions for women which would provide the possibility of combining motherhood with active participation in labor and social activity. In addition, it is also necessary to create the most favorable conditions for the all-round physical and spiritual development of the upcoming generation.

The CPSU Program, the new edition of which was accepted at the 27th CPSU Congress, clearly formulates the principles of social justice in the life of society: the actual equality of all nations and peoples which dwell in our country; genuine popular rule and equality of all citizens before the law; and respect for the individual.

These and other social guarantees (guarantee of a job, the opportunity to receive an education, housing, medical services, and material support in old age and in connection with loss of the ability to work) have been fixed in the USSR Constitution. The essence of social justice is contained in the basic principle of socialism: "From each according to his abilities; to each according to his labor."

The definitive aspect of the vital activity of the Soviet people is labor, and their active participation in social production. In the USSR full employment of the able-bodied populace is guaranteed, as well as equal pay for equal work; and all kinds of labor discrimination have been eliminated.

As is well-known, in the preceding 11th Five Year Plan, a number of regions of the country and many enterprises and organizations experienced a shortage of manpower. However, at times this was caused not so much by a reduction in the growth of labor resources, as it was by flaws in the operation of enterprises under new conditions, and by the slow rate of switching the economy onto the rails of intensive development.

The Basic Directions for the Economic and Social Development of the USSR for the Years 1986-1990 and for the Period up to the Year 2000 envisages taking a number of measures in the 12th Five Year Plan to improve the use of labor resources and to increase productivity of social labor by 20-23 percent, and by virtue of this to achieve the entire increase in national income, industrial production, agriculture, volume of shipments by rail transport, and the entire increase in the volume of construction work. This is one of the main special features of the new five-year plan.

Productivity of social labor in the years 1981-1985 increased by 16.5 percent, by virtue of which the labor of more than 15 million people was saved. At the same time the rates of growth of labor productivity in industry, in agriculture, in transport and in other production branches were lower than planned in the tasks. Growth rates of labor productivity could be higher if it were possible to significantly reduce loss of work time. In recent years loss of work time because of shirking, stoppages, and absenteeism with the permission of the administration declined somewhat, but their rates were nevertheless high. Many workers at enterprises are diverted from their basic activities, which also has a negative effect on growth of labor productivity and the overall results of their work. At the same time one must not forget that increasing productivity of social labor by only one percent would provide an increase to the national income in the amount of more than 5 billion rubles.

A significant resource for growth of labor productivity is reduction of the turnover of manpower. Although in recent years personnel turnover in all sectors of the national economy has noticeably decreased, it is nevertheless

quite high. There are still quite a few industrial enterprises and construction organizations where losses of work time during shifts are as high as before (3-5 percent of shift time). A significant portion of these losses is due to organizational disorder and supply stoppages, a low level of labor organization, and violations of labor discipline.

In the 12th Five Year Plan very extensive work will be carried out on certification and rationalization of workplaces in the branches of the national economy. An important place will be given to questions of improving the system of wages and wage incentives based on the actual labor contribution of each worker, increasing the social prestige of engineer work, improving the organization and setting of norms for labor in accordance with the tasks of technical retooling and reconstruction of the national economy, and introducing the achievements of science and technology to production.

During the years of the 11th Five Year Plan the proportion of those employed in mechanized labor in industry, construction, and agriculture increased. At the same time, manual labor is still being eliminated slowly in production. During the years 1986-1990 more intensive measures will be taken to reduce the number of workers employed at manual labor; it is planned to reduce their number by not less than 5 million persons.

Measures will continue for increasing the wage rates for workers and the salaries of white-collar employees in the industrial branches of the national economy (moreover, basically by virtue of and within the limits of the resources earned by the enterprises themselves), and for workers in the non-production sphere (specifically, in popular education, health care, and culture, by virtue of centralized sources).

Major measures are envisaged in the sphere of improving working and socio-domestic conditions in the work of labor collectives.

State statistical organs regularly conduct analyses of the occupation of the able-bodied populace and its distribution by spheres of activity, and of the provision of manpower for the separate sectors of the national economy; they monitor the observance of ceilings in the number of workers and employees; they also monitor the measures taken for improving wages in the course of economic experiments in industry, in transport, in domestic services and other sectors; and they analyze the factors of the growth of labor productivity. More profound analysis of statistical materials must be made on questions of the occupation and use of labor resources, on strengthening labor discipline and reducing the loss of work time. More active work is to be undertaken on studying the effectiveness of expenditure of embodied labor and live labor for production of social products; and on disclosing reserves for growth of labor productivity at industrial enterprises, construction projects, and on kolkhozes, sovkhozes and other farms. As before, the tasks of disclosing and analyzing the reasons for loss of work time and insufficient utilization of labor resources, remain important ones.

Under conditions of orienting the economy toward strengthening in every way the intensification of production and achieving the greatest end results for the least expenditure of labor and resources, the state statistical organs must concentrate their activities on questions of working out and analyzing

the indicators which most fully reflect qualitative transformations in labor; increasing the level of its mechanization, automation, computerization and robotization; and ensuring close correlation between wages and the level of labor productivity achieved.

Attention must be focused on studying the relationship which has evolved in paying wages to certain categories of workers according to branch; and wages of workers and engineering-technical workers, and also in the incentive value of prizes, in increasing production volume, in raising labor productivity, and in conserving material resources. We must analyze more deeply the results of implementing scientific-technical achievements in production and we must determine their influence on their influence on growth of labor productivity and improved use of labor resources. The latter depends to a great extent on improving labor organization, and on certification and rationalization of workplaces. In this connection, the significance of the analysis of the brigade and other collective forms of labor organization is increasing, as the study and spread of progressive experience in certification and rationalization of workplaces, and the work of the best brigades.

Special accounting is being introduced in order to monitor the implementation of all the aforementioned measures in this area. The task consists of ensuring the gathering and processing of data, and conducting comprehensive analysis of the processes connected with the study of the effectiveness of the brigade form of labor organization, and the certification and rationalization of workplaces.

The social program of the 12th Five Year Plan envisages implementing major measures for further increasing the material and cultural standard of living of the people. It envisages that in 1990, real per-capita income will increase by 13-15 percent in comparison with 1985, and that the needs of the populace for goods and services will be more fully satisfied.

Social consumption funds will increase at a rate exceeding that of labor income. During the 11th Five Year Plan the volume of social consumption funds reached 146.5 billion rubles. In 1990 they will increase by 20-23 percent, and will amount to more than 600 rubles per capita.

It is planned to increase the scale of housing construction and to improve its quality, and to increase the provision of conveniences, municipal and domestic services to the residents of both the urban and rural areas.

The 12th Five Year Plan envisages housing construction with an overall area of 565-570 million square meters. At the present time 87 percent of the families in the country have their own apartment or their own home. It is planned to increase housing construction in the rural areas; in the North, in the East, and in other newly-settled areas of the country. Significant resources will be directed toward providing conveniences to the cities and villages, and in developing municipal facilities and public transportation.

The material-technical base of the tourism sphere is expanding. During the five-year plan tourist complexes will be built, as well as hotels, bases and camping grounds for 40,000 persons; rest homes and boarding houses with room for 14,000 persons; and a significant number of physical culture and health care projects will be put into operation.

Health care will be further developed. The system of hospital and walk-in polyclinic establishments will be enlarged and its capacity expanded. The number of places in homes for the elderly and for invalids as well as for handicapped children will increase significantly.

In the area of preventive medicine, questions of increasing the quality of medical services, improving preventive-care examinations of the populace, development of a system of preventive-care sanatoria, preventive-care and healing, and sanitarium-resort institutions will be given top priority.

It is planned to carry out a number of measures for strengthening state aid to families which are not well off, which have children up to 12 years of age, and to improve the material support to veterans of war and labor.

Improving the system of national education is oriented toward improving the quality of instruction, and preparation of the upcoming generation for socially-useful labor in accordance with the reform of the general educational and vocational schools. In accordance with the basic principles of school reform it is planned to introduce new spaces for more than 7,000,000 students. This will make it possible to begin school instruction of children everywhere from the age of six.

By the end of 1990, the number of children in preschool institutions will reach 19.2 million persons, as opposed to 16.1 million in 1985. To achieve this it will be necessary to open preschool institutions with spaces for 3,000,000 children.

During the five-year plan, 13.7 million skilled workers will be trained in vocational-technical educational institutions; and vocational-technical institutions will be constructed with spaces for not less than 810,000 persons.

Cultural services will be improved in the 12th Five Year Plan, by virtue of construction of palaces of culture, clubs and movie theaters, especially in the rural areas.

The Food Program is being consistently put into operation in the country, thus meeting more completely the needs of the populace for foodstuffs. Its realization in the coming five-year plan will be a major new step in raising the people's material standard of living. At the end of the 1980's it is planned to raise the consumption of meat and meat products to an average of up to 70 kg per person, which is a 21 percent increase in comparison with the year 1980; milk and dairy products--up to 330-340 kg, or a 5-8 percent increase; fish and seafood--up to 19 kg--an 8 percent increase; eggs--up to 260-266 eggs--a 9-11 percent increase; vegetable oil--to 13.2 kg, which is a 50 percent increase; vegetables--up to 126-135 kg, or a 30-39 percent increase; and fruits and berries--up to 60-70 kg, which is a 74-84 percent increase.

Putting into practice the strategy worked out by the party for accelerating the country's socio-economic development and achieving on this basis a qualitatively new situation for Soviet society envisages perfecting the work

of all links and branches--both those which produce consumer goods, and those which provide services to the populace. For these ends, a Comprehensive Program has been worked out for developing the production of consumer goods and the services sphere for the years 1986-2000. The program stipulates increasing output of nonfood goods by not less than a factor of 1.8-1.9, and the volume of services rendered to the populace by a factor of 2.1-2.3.

In accordance with the increasing requirements and needs of the Soviet people, in addition to improving the evolved system of nonpaid services rendered to the people from social consumption funds, it is planned to develop a wide variety and range of paid services. This program is an integral part of the Basic Directions for the Economic and Social Development of the USSR for the Years 1986-1990 and for the Period up to the Year 2000.

Specific tasks have been established for strengthening the material-technical base of the sphere of trade and public catering in the cities and rural areas; in increasing the number of retail trade stores and their specialization; and more completely meeting the needs of the populace for food at their places of work, study, and living.

An extensive system has been outlined for paid services to the citizens in connection with their engaging in private subsidiary farming: for plowing the land in their subsidiary plots; cultivating gardens; repair and operation of equipment and gardening implements; sale of products grown in private agriculture and on garden plots; and developing cooperative and individual housing construction, and providing conveniences for and repairing homes.

Enterprises and organizations of ministries and departments have been enlisted to solve the tasks of all-round development of production of consumer goods and the sphere of services--for which specific assignments have been established for rendering paid services to the workers at their places of work.

The task of the state statistical organs consists of providing timely assembly and processing of information on rendering paid services to the workers at their places of work, for the entire range of enterprises rendering an account; and also to uncover unused possibilities for further expansion of these services.

Special attention must be paid to the operation of enterprises in the domestic services sphere. As of 1 January 1986, there were more than 293,000 studios and workshops in the country, to include over 119,000 in the rural area; and 54,000 multi-purpose receiving points were in operation in the countryside. Sales volume of domestic services during the years of the 11th Five Year Plan increased by 32.3 percent, and in 1985 amounted to 10.1 billion rubles. However, the domestic services offered to the populace fell short of the planned amount by 0.7 billion rubles. The five-year plans for 17 out of 26 basic kinds of domestic services were not fulfilled, to include such kinds as repair of shoes, sewn and knitted articles; dry-cleaning, and laundering of linens; repairs on houses and apartments; and others.

At the present time enterprises of the domestic services sphere which operate under conditions of developing methods of control and the economic mechanism have noticeably improved the indicators for their activities, and have begun to render more paid services to the populace. However, many domestic services enterprises do not utilize to the fullest the existing possibilities for satisfying the needs of the populace for services; they violate the terms and permit low quality in filling the orders. In analyzing the statistical materials, more attention must be paid anew to the qualitative indicators of the operation of domestic services enterprises, and to the results of their work.

Presently questions of the study of the quality of consumer goods and satisfying consumer demand for high-quality and fashionable articles are becoming more urgent. It is planned to conduct quarterly analysis of statistical materials on the quality of consumer goods which are introduced to trade. These questions will also be studied on the basis of special investigations. During the second half of 1986, one-time random investigations will be conducted on the quality of products manufactured at new and reconstructed enterprises; families will be polled on the quality of the goods they have acquired; and products of light industry of reduced quality which have been returned to the trade organizations for repairs will be investigated as well.

In recent years a tense situation has evolved in observing the proportions of supply and demand for goods and services. Plans for developing the retail trade turnover and domestic services to the populace have been systematically unfulfilled. For this reason, and also because the assortment and quality of manufactured goods do not correspond to the increasing demand for them and because of the insufficient development of the services sphere the demand of the populace is not being met for shoes and goods for sports, tourism, and relaxation; for certain goods for cultural-domestic purposes; for building materials; for meat and vegetable products; for gardening implements, machinery, and equipment for work on subsidiary farm plots; and for repairs and certain other kinds of domestic services.

In this connection comprehensive analysis is required of the proportional development of consumer goods production; of the retail trade turnover and paid services and the monetary income of the populace; and of the correspondence of the assortment of goods, kinds of services and their quality to the needs of the consumers. Improved analysis must be made of the fulfillment by industrial enterprises of the contracted obligations for deliveries of goods to the trade organizations, and the substantiation of their orders for goods; and studies must be made on questions of rational distribution of trade resources according to regions of the country.

Further improvement and intensification is also required in analysis of questions of the organization of trade, and the quality of trade services to the populace. For these purposes the statistical organs must make wider practice of customer survey questionnaires; and must as before maintain systematic surveillance over the level and the dynamic of state retail prices for consumer goods, and particularly goods for children; they must also monitor prices for products sold in the kolkhoz markets.

Still an important direction of economic work is analysis of the course of fulfilling the Food Program and providing certain foodstuffs to the populace as well as study of the causes for the occurrence of losses of foodstuffs not only in trade, but also during transportation, processing, and use of foods at public catering enterprises; study of possible ways of overcoming losses at all stages of delivery of goods to the consumers; and study of the characteristic features of the state and the development of the material-technical base of the sphere of trade for storing foodstuffs.

In the social program a significant position is given to putting into operation over 110,000,000 square meters of living space, while 10,000,000 citizens are moving into new houses and are improving their living conditions. In the 12th Five-Year Plan the high rates of housing construction will be maintained, and installation of conveniences in existing urban and rural housing will be carried out at an accelerated rate.

Economic work in the area of statistics on housing and municipal facilities must be concentrated on improving the system of indicators which reflect living conditions, construction of new housing, and major repairs and reconstruction of available housing and its rational distribution.

The most important tasks of social statistics are profound research into the problems of preserving one's health; in developing mass physical culture, sports and tourism, the people's leisure time, their way of life, the organization of the family, and improving the working and domestic conditions of women and young people; also, studying the demographic processes and the indicators of the rates of birth, sickness and death among the populace (as opposed to individual illnesses), marriages and divorces, and the quality of medical assistance to the populace.

Analysis of the above-mentioned problems must be conducted, making wide use of statistical materials from other sectors which disclose changes in the conditions and the content of labor, domestic life, and relaxation of the workers.

More profound study is required on the problem of reducing injuries on the job, simultaneously combining this with an analysis of the indicators on expenditures on measures for work safety and safety equipment, as well as the indicators on the material consequences of mishaps and accidents.

Comprehensive analysis of statistics on health care must be supplemented by an all-round characterization of the development of the material-technical base of institutions for health care, physical culture, sports, and tourism.

In analysis of the demographic processes, an important source of data will be provided by the trial census of 1986, the program for which envisages receiving extensive information not only on demographic, but also on other socio-economic phenomena and processes.

Statistics on culture must first of all concern themselves with study of the problems of reforms in the general-educational and vocational schools; in the organization of school training, and the labor-orientation of the

students. A comprehensive study must be made on questions of the development of the socio-cultural sphere, on the operation of theaters, movie houses, palaces of culture, clubs and other cultural-educational institutions functioning not only in the urban but also in the rural areas. A large portion of the analysis must be devoted to questions of training and use of cadres with higher and secondary specialized education, as well as scientific workers which have an academic degree; and to questions of putting scientific developments into production.

In the area of raising the welfare and increasing the income of the populace, and the consumption of material goods and services, questions will be studied on the assortment and quality of goods for cultural-domestic and household purposes; on developing the system of paid services to the populace; on the conditions and quality of the work of enterprises engaged in providing services to the populace; on the demand for material goods and services in the families; on the monetary expenses of the populace; and on the social development of the rural area.

Along with this, studies will also be made on negative phenomena such as drunkenness and alcoholism, non-labor income, and others.

The range of social questions studied with the aid of one-time accounting and surveys is expanding. Specifically, it is planned to conduct sample surveys of the quality of domestic and socio-cultural services to the workers at their workplaces, and the quality of trade services to the populace. In 1988 a questionnaire is planned for an investigation of the quality of newly-built housing projects put into operation, and the quality of major repairs to existing housing; a survey of the working and living conditions of young families; a one-time account on the distribution of the population of workers and employees in the national economy according to the amounts of their wages; an accounting on cultural and sports complexes; and others.

In the measures taken by the board of the USSR Central Statistical Administration [TsSU], a great deal of attention was devoted to the development of statistical science; to expanding and strengthening the ties between the state statistical organs and scientific-research institutions and organizations; and to increasing the effectiveness of scientific research. All of this must be carried out in the direction of ensuring more extensive research on the social processes and phenomena which reflect an increase in the material and cultural standard of living of the populace.

The party's policy on intensification of social production, and implementing a complex of measures for perfecting the methods of management of the economy, envisages all-round utilization of the advantages of a socialist planned economy to achieve the most complete satisfaction of the constantly-increasing material and spiritual needs of the populace. The bounds of socio-economic development of the country planned for the 12th Five Year Plan and for the period up to the year 2000 are fraught with new and increased demands on statistics as one of the important levers of state control over the national economy.

The main task of the TsSU and its local organs consists of ensuring the complete development and timely presentation to administrative, planning and economic organs of the necessary statistical information, which comprehensively characterizes the course of carrying out the plans for economic and social development. It will be necessary to expand the range of advance signal information and control over carrying out the instructions of the party and the government on questions of the country's social development and on increasing the people's welfare.

Guided by the decisions of the 27th CPSU Congress, workers at the state statistical organs are applying all their efforts, knowledge and experience to successfully implement measures for further improving the system of socioeconomic indicators, and for raising the level of economic analysis and scientific research.

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